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Spanish Influenza—It's Here Again

AS this editorial is being written, the Chicago newspapers are recording the reappearance of influenza. The first cases were reported on the 10th or 12th of this month (January). It appeared simultaneously in Camp Grant and Great Lakes Naval Training Station. Since then the number has doubled daily. We lack detailed information from other parts of the country, but presumably the epidemic is quite general. Thus far the cases have been light, but there have been corresponding increases in pneumonia, and the mortality of this disease is high.

We warn every physician to make preparations for another general visitation of Spanish influenza. Get your house (your town) in order. Organize your forces. See that you have hospital and nursing accommodations sufficient. Lay in stocks of the remedies which you are likely to require. With the experience acquired during the terrible epidemic of last year, it should be much easier to meet the situation at the present time, the number of cases should be smaller, and the mortality should be much less.

As to treatment, our suggestions are in the main the same as were given through these pages last year. For prophylaxis, (1) remember that the disease is contagious, and discourage the mingling of people in crowds; (2) see that the secretions of persons ill with the disease are kept from contact with the respiratory mucous membranes of others liable to attack; (3) the resistance of patients exposed to the disease should be raised by the use of special immunizing bacterins.

For keeping the mouth and nose clean, we believe the best remedies to be chloroazene (which is water-soluble and may be used in aqueous solution), and dichloramine-T, used in oil (chlorcosane) solution. The first is the most convenient, the second assures prolonged contact with the germicide. Dichloramine-T is now available in tablet form, thereby increasing its range of usefulness.

The bacterin most widely known and

most generally used is the influenza-pneumococcus-combined bacterin recommended by Rosenow, containing the four types of pneumococcus, streptococcus pyogenes and viridans, the B. influenzae, and the staphylococcus. Since this was originally recommended by Rosenow, he has advised the use of a lipovaccine containing the same organisms, but on account of restrictions of the U. S. Hygienic Laboratory this can not be offered for sale. The suspension in salt solution answers the purpose equally well, but three doses are required at five-day intervals.

Persons coming down with the disease should be sent to bed immediately. The mild cases are the most dangerous, in a way, first because these people "keep around" until the condition becomes exaggerated and dangerous, and, second, by keeping around they carry contagion to hundreds of others.

Restrict the amount of food. Complete abstention for from 24 to 48 hours is often desirable. Nobody will be harmed by it. Give plenty of acid drinks, such as lemonade or orange juice, or hot tea with a little lemon squeezed into it. If food is deemed necessary, let it be of the simplest kind, and liquid. Clean out the bowels with a laxative saline, perhaps preceded by small doses of calomel. Keep the intestinal canal antiseptic with the sulphocarbolates, giving to effect.

The remedy which in our experience has been most effective for controlling the disease is calcidin (calx iodata). This should be given to every patient at short intervals in good-sized doses. An adult may take 1 grain every two to three hours—children in proportion.

Most physicians administer aspirin for the relief of pain. For this purpose, if not abused, it is a good remedy. The temptation is to give too much. Remember that all coaltar products are depressing. By abusing them more harm will be done than good.

We hear that intestinal "grip" is appearing during this epidemic. The fundamentals of treatment are the same as for the pulmonary type, but special attention should be given to the bowels. Again, complete abstention from food, with saline laxative, intestinal antiseptics, and complete rest, are the remedies of greatest value. In this type of disease the depression is often considerable. Keep this in mind and insist upon complete relaxation—rest in bed in every case.

In all febrile conditions our old standbys —those which have been most used and best loved by our friends—are dosimetric trinity and the defervescent compound, in which we get the specific action of aconitine, properly guarded by the addition of other remedies. If the heart becomes weak, digitalis in some form is the drug of choice. Strychnine, camphor, or other supportive remedies are also of value.

Convalescence is often slow, and at this stage the patient requires most careful watching. Of tonic remedies our favorite is triple arsenates with nuclein.

We shall be glad to hear from our readers as to the progress of influenza in their own localities. The pages of CLINICAL MEDICINE are again offered, as last year, for the interchange of information and comment.

The doctor sees all the weakness of mankind, the lawyer all the wickedness, the theologian all the stupidity.—Schopenhauer.

BENZYL BENZOATE—A NONNARCOTIC SUBSTITUTE FOR OPIUM

Much interest has recently been expressed in the discovery of Prof. David I. Macht, of Johns Hopkins University, that a comparatively simple chemical—benzyl benzoate—possesses much of the pain-relieving qualities of opium without any of the latter's toxic or habit-forming dangers. Doctor Macht hit upon this discovery when studying one of the rarer alkaloids of opium—papaverine—a powerful antispasmodic which has been little studied in this country. He found that papaverine contained the benzyl radicle, and after some further study came to the conclusion that the pain-relieving factor in it was this benzyl group. As likely to be the most efficient synthetic substance, he began the investigation of benzyl benzoate, which has the formula $C_{14}H_{12}O_2$.

Benzyl benzoate has now been very carefully investigated by Doctor Macht and several other competent clinicians, who have definitely shown that it is an efficient antispasmodic and pain reliever in such conditions as diarrhea, dysentery, intestinal and biliary colic, mucous colitis, spastic constipation, dysmenorrhea, vesical spasm, nocturnal enuresis, and even in an-

gina pectoris and asthma, as well as in a variety of other painful conditions of spasmodic origin.

An interesting paper relative to this product is contributed by Dr. J. Morton Boice to *The New York Medical Journal* for December 13. Especially interesting, he states, were the results obtained in the treatment of dysmenorrhea. Cases of this troublesome complaint were relieved with benzyl benzoate which had been treated unsuccessfully with other remedies, including opiates and pessaries.

Litzenberg treated forty-three cases of dysmenorrhea with relief in more than eighty percent. Benzyl benzoate is also effective in relieving labor pains and for the prevention of miscarriage. It was tried with good results in high blood pressure. Quite a number of cases of asthma were decidedly relieved by its administration. It seems effective in intestinal colic, vesical spasm, diarrhea and dysentery, and of some value in hepatic and renal colics. Doctor Solis Cohen used it in spasmodic cough with a good deal of satisfaction.

In concluding his study of this drug, Boice raises the following question: "Where, therefore, an antispasmodic of the opium type is indicated, for its relaxing action on the unstriped muscle fibre, would it not be fair to try out benzyl benzoate in conditions such as dysmenorrhea, asthma, diarrhea, arteriosclerosis, and esophageal and pyloric strictures?"

The evidence thus far submitted, as a result of extensive clinical use, will incline many physicians to answer this question with an enthusiastic "yes!"

Let me offer you a creed; the creed of work. Young men, work! Life has no other reason for being, and each of us is here only to perform his task. I have always distrusted chimeras. Illusion is bad for a man or a people. The only strong men are the men who work. Work alone gives courage and faith.—Zola.

SPEAKING ABOUT THE "FLU"

I have just been reading an article in one of the medical weeklies, contributed by an army medical officer, discussing the treatment of influenza. *Mirabile dictu,* the remedy which he has found of greatest value is our old friend tincture of aconite! Truly the world does move, when in this highly progressive and scientific age we can find men who are brave enough to admit that the good old remedies of our fathers and grandfathers are really effective in the treatment of the modern generation.

After all, practical clinicians who use aconite know today, as physicians knew fifty years ago, that this is one of the best remedies (yes, I think the best of all remedies) for the treatment of febrile diseases of the respiratory tract. It relieves more quickly than any other drug the vasomotor spasm which is largely responsible for the local congestion characteristic of this type of disease; it brings the blood to the surface; it quiets an irritable heart; it promotes the natural flow of the secretions of the skin and kidneys; and, directly or indirectly, it relieves nervous irritability.

There are hundreds of doctors who have checked up the action of aconite at the bedside, and with the fingers on the wrist have seen the pulse grow slower and softer, the skin become moist, the temperature fall, and the patient fall into a quiet, restful sleep. Men who have had experiences like these *know* what aconite will do.

Aconite is, of course, best administered in alkaloidal form. The failures of the drug have mainly been due to the use of inactive, unreliable galenic preparations. Not long ago, a doctor reported to us that a patient of his, through mistake, took a teaspoonful of a tincture of aconite. Fortunately for this patient, the drug was inert, and nothing happened. Of course, nothing of therapeutic value would have happened if this drug had been given in a case of pneumonia or influenza. Not so with aconitine. Here is a definite chemical substance, always the same and always to be relied upon. It may be given in carefully measured doses, increased or diminished as required to give exact physiologic action and definite therapeutic results.

Aconitine lends itself to numerous combinations, as, for instance, with veratrine, to increase its diuretic action; with digitalin, to steady, slow and strengthen the action of the heart; with strychnine, for its tonic effect; with atropine to relax spasm of unstriped muscle.

Aconitine is, in our opinion, the most valuable of all the alkaloids. It has not, of course, the pain-relieving action of morphine, but it is not a habit-forming drug, and may be used, in proper dosage, without fear of harm. The results obtained with it are less striking than those obtained with

strychnine, but we are learning today that strychnine is not of such universal utility as those who concoct the various "I. Q. S." mixtures seem to imagine. And, of course, aconitine is not as generally used as quinine, although, for the treatment of beginning colds and most respiratory affections, we believe aconitine to be far superior to that drug—diseases of far more frequent occurrence in temperate climates than malaria, for which quinine is a specific.

There ought to be a restudy, a revaluation of the action of aconitine. We are confident that such research would place the drug on the therapeutic pedestal which it occupied some years ago. It should not be —it must not be—allowed to fall into disrepute.

We all dread a bodily paralysis, and make use of every contrivance to avoid it, but none of us are troubled about a paralysis of the mind.—Epictetus.

STARVING AUSTRIA—WHAT OF THE COMING GENERATION?

As we are writing this editorial—it is the day after Christmas—we have just read a newspaper clipping reporting an interview with Dr. Karl Renner, the chancellor of Austria, in which the deplorable conditions existing in what remains of the once proud dual empire are described graphically.

Doctor Renner declares that positive starvation of the people is imminent, and, with the rationing in force, considering the supplies on hand and in view, he places the date of literal famine as coming on January 21. Doctor Renner says:

"It is a question of bare existence before which partisanship and diplomacy are trivial. If Austria perishes, it will be recorded in history that in the day of fast steamships, railroads, telegraphs and wireless, there took place a tragedy for which all humanity must bear the blame."

The interviewer continues his report by saying that it was in this strain that Doctor Renner talked as he sat in a small, meagerly furnished room where he and his emaciated staff have taken lodging. There were lines of suffering on his broad face not yet traced when he signed the treaty of St. Germain, but, his combination of fatalism and faith remains. His thoughts turned abruptly to the children of Austria.

"We have a system of weighing school children," he said, "by which it has been discovered that our pupils weigh only two-thirds of normal. As for height, an Austrian boy of 14 is about as tall as an average boy of 8 elsewhere. Sixty percent of the children in the country a year ago are now dead. Of newborn infants, in Vienna, ninety percent perish immediately after birth."

"And others with them," interrupted the chancellor's secretary.

"The mothers, too," confirmed the chancellor. "There is no milk in Vienna."

He added that an enormous number of the children are afflicted with rickets and bone softening. "The citizenship of Austria will not be normal for generations," he asserted and then continued: "We have eaten nearly everything, and, next month, we shall have consumed all."

The war is over, we are told, and we are strongly inclined to say, let those who have started it take their medicine. Of course, that is all very well in theory, but, in practice, we shall injure ourselves and all mankind if we permit conditions as they exist in Austria and elsewhere to go on. It is unthinkable that the generation now growing up can be permitted to develop into men and women so deplorably inferior physically, and, therefore, mentally; because the deprivation to which the children in the conquered countries are exposed necessarily have a depressing and stultifying effect upon the mentality. It is not possible for the teachers to practice any enthusiasm in their training of the youth entrusted to their care. In addition to mental depression and inferiority, there must come the feeling of injury, of hopelessness, and this produces rebellion and worse things.

We are reminded by this interview of an article contributed by Dr. Hans Pollitzer to the *Wiener Medizinische Wochenschrift*. In this article, the problems of the Wiener Krankenhaus, formerly one of the largest and greatest hospitals in the world, are discussed, and conditions as they are actually existing are deplorable.

For instance, saying that this great institution is absolutely without means to do the simplest things necessary, the author relates the case of a patient in whom an examination of the uric-acid toleration is necessary in order to determine whether it was a question of a gouty or an arthritic diathesis. For this test, five mils of glycerin is required. The other reagents have

been donated. However, the clinic can not purchase even this small amount of glycerin. In its cashbox there is held actually about three crowns, left over from nine hundred and thirty crowns granted annually by the state, but of which seven hundred are deducted for telephone service. So, Doctor Pollitzer adds, one of the leading clinical institutes of the country, that always stood at the head as to its medical facilities, can not determine whether in a given case a uric-acid diathesis exists or not.

Doctor Pollitzer cites a friendly American who suggested to him that those who had cooked the broth might eat it. Yet, this is not the position which the conquerors may assume and retain their self-respect. It is not like America to be cognizant of intense, acute suffering anywhere in the world and remain unmoved.

In the days just passed, the newspapers have told over and over again how the buying for Christmas was more enthusiastic, more extravagant than ever before. Here we are in America, rolling in wealth, millions of people spending money and as they have never before spent it, on articles that often are useless and even worse than useless; buying everything from silk socks to grand pianos, and at exorbitant prices; taking in the theatre, the concert, the movie show; paying cheerfully, or at least philosophically, the inflated prices for food products, for clothing, for everything else that we consider needful to our comfort. And, over in Europe, there is suffering, starvation, famine. There are all the elements of an actual destruction of a people that once stood among the foremost among civilized nations.

Shall this be permitted? Are we not our brothers' keepers? Is it not our duty to help those poor miserable children in Austria, even if we believe and declare that their parents have done wrong? Surely the children have not sinned and they should and must be succored.

GENERAL LEONARD WOOD—PHYSICIAN AND SOLDIER

The British Medical Journal, for September 20 last, presents an appreciative editorial on General Leonard Wood that shows this remarkable American soldier-physician in such a true light that we venture to reprint it in CLINICAL MEDICINE, being convinced that our readers will be glad to take cognizance of the just estimation in which our illustrious colleague is held abroad. The *Journal* says:

"It is announced that General Leonard Wood has been nominated as Republican candidate for the presidency of the United States. This remarkable man is, like M. Clemenceau, a member of the medical profession. A sketch of his career has already been given in these columns, but the story of his rise from the position of an obscure practitioner to be one of the commanding officers of the United States Army is so romantic that it may be told in fuller detail. General Wood's father was a country doctor and a veteran of the Civil war. His distinguished son was born at Westchester, New Hampshire, on October 9th, 1860, but his boyhood was spent at Camp Cod. His first thought was to enter the navy, but his father wished him to follow his own profession. Accordingly, in 1880, young Wood became a student at Harvard, where he earned his living with the help of a scholarship supplemented by tutorial work. At the age of 24 he began practice in a Boston slum. A year later, he passed the examination for the army medical service, coming out second in a batch of fifty-nine. As there was no vacancy in the regular army, he entered as a contract surgeon in the war against the Apaches that had just broken out. He was in the thick of the Geronimo campaign in the Southwest, the fiercest of all the Indian wars. The troops were mounted, and Wood had no experience of riding. He was given an unbroken broncho, but he quickly mastered his steed, and on the first day rode thirty-nine miles through the roughest part of Arizona. He became lieutenant in command of troops of the fighting line, and for his gallantry received the highest reward given by the American government. Wood, like his fast friend Roosevelt, was a noted athlete, and won fame as a football player. When Grover Cleveland was president, he became the White House physician, and he continued in that office with him and afterwards with McKinley. At the time of the outbreak of the war with Spain, Wood had nearly made up his mind to leave the army and try his fortune on a sheep ranch in New Mexico. The war brought him his chance. Roosevelt was offered the com-

mand of a regiment of rough riders; he refused to be colonel, but agreed to serve as lieutenant-colonel under Wood. Wood drew up the plans for raising the men, and in three weeks the rough riders were formed. A month after landing in Cuba, he became a brigadier-general, and two months later he was governor of Santiago. Before the close of the year, he was a major-general though not yet thirty-eight. As governor he organized the administration of the young republic, established schools and courts of justice, stamped out yellow fever, and left the island cleansed and healthy. When Roosevelt became president, Wood was sent to the Philippines, where for a year and a half he fought Moros through woods, swamps, mountains, and jungles; during all that time he was almost continually under fire. From the rulership of the province of Mindanao, he went to Manila to become commander of the department of the Philippines, where he established law and order. All this was accomplished in three years. In 1903, he became a major-general, and in 1908 he was appointed Commander of the Eastern Department. He became Chief of the Staff of the United States Army in 1910, and resolutely set himself to break the bonds of red tape. He preached the necessity of preparedness in season and out of season, especially urging the military training of boys in schools. In 1914, he went back to the command of the Eastern Department, and, when the National Guard was called up, out of the disorder of the Mexican situation, he evolved a system and handled men and supplies with the utmost efficiency. General Wood held a high command in the recent war. He was wounded at the beginning of last year by the bursting of a gun during a test in France, but he is still an active force in his own country."

Divide your time equally between men and books. Take as little as possible on trust.—Doctor Osler.

YOUR INCOME TAX

It is rapidly getting to the point where a man who has an income tax to pay must hire an accountant and engage a lawyer—and, even then, not be sure that he is going to keep out of jail. Nobody seems to understand the income-tax law. It is an abstruse topic, and regular courses are now provided on it in various universities. Men go to school these days not to study Latin, Greek and psychology, but to take Professor Jones' course on bolshevistic economics, and Professor Robinson's on the income tax. The information imparted on all these subjects is more or less hazy and indefinite, but the modern man has to make a stagger at them if he wants to keep up to date and in the game.

All of which leads up to the suggestion that if you have an income tax to pay (and of course you have), it is the part of wisdom and safety to learn all you can about it. Several large volumes have been published on this subject. Montgomery's, for instance, is one of the best. It will cost you—$9.00—but you really can get just about as much help from booklets issued by the banks and trust companies; and that is really the purpose of this brief editorial—to advise you to lay in a stock of these booklets and pamphlets and study them at your leisure. One of the best is issued by the Guaranty Trust Company of New York, which publishes a whole series of valuable pamphlets and books (all of which may be obtained free) upon financial topics. Halsey, Stuart & Co., of Chicago, also publish an excellent booklet, "1920 Federal Income and War Tax Laws," which may be obtained upon request. Another good booklet on this subject is that published by the Chicago Association of Credit Men. May I suggest that you write for copies—but don't forget to refer to CLINICAL MEDICINE, to enclose stamps, and to say "Thanks."

Trifles make perfection, and perfection is no trifle. —Michael Angelo.

CHILBLAINS?

Therapeutically speaking, that common but agonizing minor (?) ailment, chilblains, is a perpetual interrogation point. There are almost as many remedies as there are doctors, and for this reason it takes a good deal of courage to suggest something new.

The man who can give real help to some thousands of sufferers from this complaint will earn and deserve much gratitude. For this reason we particularly recommend to the readers of CLINICAL MEDICINE the interesting article on chilblains and frostbite contributed by Dr. A. F. Schellschmidt, published elsewhere in this issue. The Doc-

tor's results speak for themselves, and his enthusiasm, coming, as it does, not from a beginner but from a man who has had years of experience in treating these cases, is the best of evidence that he has struck something really worth while.

We hope many readers of CLINICAL MEDICINE will try the method, and, having tried it, report.

They that have learned the way of progress shall take others with them.—F. J. Gould.

I ACCEPT—THANK YOU

I own an automobile, and, like thousands of other members of the Ancient and Honorable Society of the Common People, I am already looking forward to my summer vacation. Where shall I go to get the greatest amount of pleasure during the two to four weeks that I can spare from my work? I propose to accept the invitation which promises me the best "run" for my money. I want good scenery, good roads, a comfortable place to stay nights, and I want to go where I can get acquainted with "real" people.

There are many other automobile owners who are looking around for such an invitation, just as I am. Who can offer the best trip? Let's hear from as many of you as possible, so that we can pass along this information to the readers of CLINICAL MEDICINE.

Do not read as the children read, to amuse yourself, nor as ambitious people read, to get instruction. No! Read to live, make an intellectual atmosphere for your soul, which shall be composed of the emanation of all the great minds.—Flaubert.

DENTAL RESEARCH

America is rapidly getting into the front rank in scientific research. Time was when we looked to Germany for distinctive work of this kind. Now, we are proud to say, Europe is looking toward America. From a technical standpoint, American dentistry stands head and shoulders above that of other countries. It is, therefore, gratifying to see that the dentists are determined to place American dentistry first in the matter of scientific research. That this can be done is shown by the appearance of *The Journal of Dental Research*, published at 437 West 59th Street, New York City. This journal will bear favorable comparison with such medical research journals as *The Archives of Internal Medicine, The Journal of Pharmacology and Experimental Therapeutics, The Journal of Experimental Medicine,* and other distinctive journals of this type.

The Journal of Dental Research is not a "popular" journal, nor is it intended to be. It records studies intended to bring about real additions to dental science; in other words, it is a journal for scientific men. We are glad to take this opportunity of commending this publication, and recommending it to the attention of any man, whether he be dentist or doctor, who is trying to push forward scientific advancement intended for the prevention of disease and the healing of the sick.

The gift of truth transcends all other gifts; the joy of truth is superior to all other joys. It exterminates thirst, it subdues sorrow.—Buddha.

EXIT THE COUNTRY DOCTOR

From all parts of the country, we are getting news that there are hundreds, yes thousands, of the smaller communities which are without doctors. There are two reasons for this situation—first reason, the great war, second, the automobile.

Thousands of physicians who served in the army, many of whom came from country localities, when they came back to civil life, sought something better than what they had before the war. They have settled in cities, and the exodus from civil life into the army, and from the army back into civil life, with all the readjustments this implies, has given good openings to many.

The big factor, however, is the automobile, linked up as it is with the good-roads movement. It now takes no longer for a doctor living in the city to run out fifteen or twenty miles into the country to visit patients than it did for the same doctor, ten years ago, to hitch up the old nag and drive out two or three miles. With the multiplication of hard roads, the automobile can be used the year around. As a consequence, the area readily accessible to the larger towns has grown larger and larger, and the competition of the man who remained in the country village more and more difficult; so, thousands of doctors have asked themselves this question — "Why shouldn't I get into the swim with the other fellow? Just because Smith lives in the city is no sign he knows more about the

practice of medicine than I do; as a matter of fact, I know durn well that he doesn't know as much. I will go into town and show him a thing or two. I can hold all my business here, and he will have to hump himself some if he can beat me out, even on Main St."

So, there you are!

But, here is a counter suggestion. There are a good many city doctors, especially those getting along in years, who feel as though they would like to slow down a little, and who have always sighed for the pleasures of country life. To such men the Garden of Eden is a cottage in the country. Why shouldn't such men move into some of these beautiful country villages, which nowadays have most of the comforts of city life and many advantages which the city does not possess? In such a place a home can be bought for a song, with peace and quiet, a garden spot, fresh fruit and beautiful scenery, and an increasing number of people of large ideas, poetic and literary instincts—and little money!

If any city doctor who reads these lines would like to make a trade with a country doctor who is anxious to get into town, we beg to offer our services to help in making the exchange.

Step right up, doctor!

True bravery is shown by performing without witness what one might be capable of doing before the world.—Rochefoucauld.

A CLEARING HOUSE FOR PUBLIC HEALTH

The creation of the League of Red Cross Societies is a long stride toward removing the difficulties in the way of all attempts to organize medical meetings in a practical way. Writing from Amsterdam, Mr. L. Muskens, Secretary of the International League Against Epilepsy, endorses the principles of the Red Cross League, which is designed to be the world clearing-house for public-health and general medical knowledge, he adds:

"The obstacles encountered by the medical conferences arise partly from the lack of international organization having the necessary authority to coordinate these meetings, partly from the overgreat specialization of the meetings.

"These congresses have remained entirely independent of each other, and the permanent commissions that have been established as a result of them have shown very limited activity. General congresses would be very useful if they could unite groups of specialists having common questions to discuss. But. no alliance ever has been made. The committees arrange for the meetings according to their own ideas, without any preliminary arrangement.

"The Red Cross might coordinate all these attempts—clearly a delicate piece of work but one of the extreme importance for the progress of medical science. All previous international committees for medicine in general have failed for lack of authority in regard to each group of specialists. The League of Red Cross Societies might invite various committees for each group, in a plenary meeting and without alienating their autonomy, to study the possibility of a world organization.

"Thus, the specialists in nervous diseases might constitute a group with the specialists in insanity and, eventually, with the psychologists; the specialists in epilepsy might enter as a subgroup. The surgeons would form another group with the orthopedists, the anesthetists, and so on. Thus, under the authority of the peacetime Red Cross, and under its direction—perhaps with a government appropriation—the committees of these groups might arrive at an agreement on special technical problems and upon the places and time for meeting."

In much the same way, the American Red Cross hopes to coordinate public-health work in the United States. In the postwar campaign which it has recently announced, it hopes to bring into cooperation medical societies, public-health and welfare organizations and philanthropic agencies all over the country. Some such nation-wide effort is necessary if preventable disease ever is to be thoroughly stamped out. And the logical agency is, the American Red Cross, just as the logical agency for the coordination of the medical sciences is, the International Red Cross.

Leading Articles

The Climacteric-Involution Period and Its Psychoses*

By LEON E. DUVAL, M. D., Gardner, Massachusetts

Senior Assistant Physician, Gardner State Colony. Formerly, Senior Assistant Physician, St. Elizabeth Hospital, Washington, D. C.

BY the term "climacteric", one usually refers to that period in a woman's life when the menstrual cycle and its attendant phenomena cease to functionate. It is well known that this is a rather critical period in a woman's existence, and we all recognize the various physical diseases liable to occur at this time. We usually explain to anxious relatives that a woman is likely to be "nervous" and emotionally unstable during this period.

But few of us, however, recognize the fact that, in the woman of unstable psychic constitution, this period may precipitate more or less serious mental disturbances. Most of us, too, forget that there is a corresponding period in the life of the male; that, while in the male there are no physical phenomena which, strictly speaking, correspond to the climacteric in the female, there is a gradual loss of sexual desire and of the sexual powers, beginning, in the normal man, at about the age of forty-five or fifty years. In both sexes, the period of from (approximately) forty-five or fifty years to sixty or sixty-five is fraught with grave possibilities for those who do not possess a stable mental makeup. The reasons for this are manifold.

In previous articles in this journal, I have explained the important role of the psychosexual life (love-life, love-interests) in the career of the individual. During the climacteric-involution period, there occurs a gradual cessation of the sexual phenomena, and the individual recognizes that his active sexual life is at an end. In the average person, this knowledge, coming gradually, after having enjoyed a satisfactory sex-life, has no unpleasant psychic effects. At this time in life, the love-interests are focused on children, grand-children or various outside affairs, and the physical sex-interests recede to the background of the psyche. As the psychoanalysts express it, the libido (love-interest) is sublimated, applied at a level above the physical, or sensuous. However we may express it, the individual becomes interested in other matters and accepts the loss of the sex-function more or less philosophically.

Unfortunately, in no small percentage of cases, no such comfortable adjustment takes place. I have, in other articles, explained that, at the basis of virtually all functional mental disorders, some sort of disturbance of the psychosexual life may be found. With this fact in mind, it is not difficult to understand how, in psychotic individuals, this critical period in the sexual life may create mental disturbances that range from mild neurotic episodes to profound incurable psychoses.

Plight of the Unmated and the Unhappily Married Woman

It is not difficult to put oneself in the place of, for instance, a spinster of forty-five or fifty years of age, childless, having no love-object, perhaps desiring a child above everything else in the world. Behind her, lie a score and ten years of long-

*This interesting and important article was intended for publication in the issue of CLINICAL MEDICINE for October, 1919. Unfortunately it was received too late and, therefore, had to be laid aside for the time being. However, the topic here discussed always is timely and worthy of our deep thought.—ED.

ing for the mate that never came—the absolute lack of any fulfilment of the normal sex-life. True, she may have been an intellectual, one who has sublimated her interests to a high degree; nevertheless, if she is not mentally stable, no outside matter can satisfactorily replace the world-old desire of accomplishment of her normal womanly functions.

Another example may be found in the married woman who has reached this period after a conjugal life rendered unhappy by sexual incompatibility, which she may or may not recognize. An impotent husband, one who is repulsive, inattentive or in other ways an unsatisfactory companion, induces a lack of sexual gratification, but, which, as a rule, the woman does not consciously realize or, if she does, rigidly represses or attempts to repress. In such a situation, the psychotic individual finds more or less difficulty of adaptation.

And what has just been said of the woman has its equivalent in the man. In the male, impotence from one cause or another is perhaps the most common basis for the psychoses that occur at this period. Quite commonly this impotence is functional in type.

According to the psychoanalysts, this type has at its basis the Edipus-complex[1], and the lack of a satisfactory mother-substitute: essentially the type of mechanism seen in many cases of dementia præcox. And it may not be amiss to state here that many of the psychoses that begin in this period correspond closely to the symptom-complex designated as dementia præcox.

In addition to the mental factors in this period, certain physical factors ought, also, to be recognized. Aside from the usual changes in the genital organs (which need not be described here), this period is one in which arteriosclerosis is likely to begin, and some of the socalled involution-psychoses seem to be based, in part, at least, upon early cerebral vascular changes. The results of these changes may be, either brief remediable psychoses or more or less chronic types. Cardiovascular, nephritic, and other physical disease-syndromes may act as predisposing or as precipitating factors of mental upsets; however, to the minds of many, if not most, psychiatrists, the real basis of these mental disturbances is found in the inherent psychic instability of the individual, which we must understand as being of considerable variation as to extent.

At this junction, I can not refrain from quoting a case that came to my attention since I began writing this paper. It is that of a man of sixty-nine, farmer, of the hardworking fairly prosperous New England type. He was sent to this institution because of periods of confusion, ideas of persecution, and socalled "spells." His was found to be a classical case of Stokes-Adams disease, and he died three days after admission. The average physician would be content to say that the psychosis was consequent upon the arteriosclerosis and other physical disease-conditions that were present. However, in one sentence, the man gave me the whole story of his condition.

The man had married his second wife, a woman of twenty-five, only four years ago. She was a gross, rather sensual type. The patient was led to marry her for economic reasons. She was his housekeeper, and he entered into an arrangement whereby she was to marry him and keep house, and receive his property at his death. Apparently the patient did not give any thought to the disparity in his own and his young wife's ages or to the sexual difficulties that might arise because of this. He was old and always fatigued from hard work, and gave little or no thought to his marital obligations. When I asked him concerning this matter, he said simply: "I always was tired and, I guess, I didn't pay as much attention to her that way as I should have done." In other words, he probably was quite impotent, while it is certain that his wife was a woman of strong sexual appetite. It was but natural that there was continual unhappiness—and the patient's assertion that he believed his wife unfaithful probably was founded upon fact. He had come to realize his impotency, and this, combined with his physical disorders, laid open the way for a psychosis. I mention this case, to show the kind of psychic factors that so often are at the basis of functional and even of some organic psychoses.

Alcoholism as a Symptom

As I have previously said, the psychic

[1] "The Edipus Complex" is a term employed in psychanalysis to express the sexual feeling for the mother and jealousy of the father that is sometimes observed in boys and young men. See Brill's "Psychanalysis," 1913.

disturbances that characterize this period vary widely in degree and symptomatology. Even in the normal, or average, woman, there is liable to occur, during the climacteric, a certain amount of emotional instability, irritability, change in attitude toward husband and relatives, as well as other slight nervous manifestations. In the neuropath, these symptoms are repeated with more or less increased intensity, while, in some cases, the dividing line between mere "nervousness" and actual psychosis is indistinctly drawn. Hysterical episodes are common during this period, in the male as well as in the female. In the male, especially, alcoholism frequently begins in this period in persons who have been total abstainers. In those who have been moderate drinkers, this period often is marked by excesses, with alcoholic psychoses as well as other types in which alcoholism is but a symptom. Many psychiatrists now believe that alcoholism always is a symptom of mental disorder or of psychotic makeup and, according to them, alcoholic psychoses are merely the acute episodes of this underlying condition. Alcohol is a means of covering up some internal mental struggle —a defense-mechanism against mental conflicts, conscious or unconscious, to which the individual is unable to adapt himself.

All of us can recall cases in which the individual resorted to alcohol whenever confronted by some painful situation. And, when there is no appreciable external reason for resorting to drink, we may be sure that thorough investigation will bring to light some painful psychic situation which the person can not meet adequately.

The nature of these internal conflicts need not be considered in this paper—the reader is referred to the rather extensive literature of the psychoanalytic school; since it is not possible to condense or sketch psychoanalysis or its theories in a paper of this length. Suffice it to say that, at the basis of all alcoholic cases, some disturbance of the psychosexual life will be found. In the male, some variation of the Edipus-complex, or latent homosexuality, is the rule, although more often than not this can be brought out only by an expert analyst. So much for the milder symptomatology of this period. A full description of the symptomatology of the psychoses of the involution-period would fill a small volume.

Simulation of Dementia Præcox

In the female, these psychoses may partake of the character of dementia præcox, or manic-depressive insanity; or, not uncommonly, paranoid episodes, brief or prolonged, may be present. In both sexes, the socalled involution-melancholia is one of the most typical psychoses of this period.

The onset may be gradual or abrupt. Suicide is only too common in these cases, often occurring at the very onset of the disease. Not infrequently, the gradual onset of the disease is not recognized by the relatives, and the psychomotor retardation and depression is ascribed to "moodiness." A death in the family, financial loss or other trouble may precipitate the onset of the psychosis. Even should the condition of the sufferer be called to the attention of a physician, the latter may fail to recognize the seriousness of the situation, regarding it as a "nervous breakdown", and advise a "change of air" or other similar inadequate and dangerous prescription.

A few weeks ago, there came to my attention the case of a middle-aged man, in poor physical health, who was seen by a physician following a superficial attempt at suicide. The physician did not deem the patient's mild depression worthy of institutional care or of close observation for preventing suicide. The man was allowed his freedom and, within two weeks, had ended his life by suicide. In such a case, the physician is to be blamed for absolutely inexcusable carelessness, if not for criminal ignorance.

In this day and age, there is no reason why the physician, be he general practitioner or high-priced specialist in any branch, should fail to possess an elementary knowledge of psychiatry, such as will enable him to detect such mental cases as call for institutional treatment.

Patients Must Receive Institutional Care

The physician should bear in mind the fact that every mentally depressed person is a potential suicide, and, as such, can be given adequate treatment only in an institution. No family, no matter how solicitous for the patient's welfare they may be, can give him or her the continual care and unremitting watchfulness necessary to pre-

vent suicide in an individual determined to die. The family can not appreciate the ingenuity displayed by such patients toward attaining their ends. Moreover, in these cases, as well as in practically every other form of mental disease, the patient's chances for recovery are infinitely better if he is removed from home-surroundings.

The involution-type of depression may be preceded or followed by an excitement which may or may not be like that of manic-depressive psychosis.

The paranoid episodes of this period also are of serious import, inasmuch as they not only make the patient troublesome, but, often absolutely dangerous to society. Since these cases only can be treated in institutions, where those in charge are able to anticipate dangerous tendencies, as well as to give them proper treatment, they should be committed to insane-hospitals as soon as recognized.

In addition to the more or less typical psychoses seen in this period, there frequently are seen atypical cases in which no definite diagnosis can be made. Also, there are seen a considerable variety of brief episodes, during which the individual's behavior is such as to excite comment, but, perhaps, do not call especial attention to his mental condition, unless he is seen by an experienced observer.

Prognosis in Cases of Climacteric Psychoses

The prognosis of the psychoses of the climacteric-involution period is quite variable, and, as a rule, one must be very guarded in giving an opinion as to the outcome of any given case. The general makeup of the individual has much to do with the prognosis, and there are likely to be individual factors in each case which it is difficult or impossible to determine. The dementia-præcox-like types of psychoses that begin in this period are prone to be of long duration. The manic-depressive types have a better outlook; still, there are so many exceptions to this that we can not make a definite statement in a given case until the victim has been under observation for many months. The acute alcoholic types are recoverable, but, tend to recur; and the alcoholic dementias are quite common.

A Case in Point

I desire to cite briefly a case that came under my observation some time ago, which illustrates fairly well some points mentioned above.

J. B., aged fifty-five, an American of German extraction, was committed to the hospital because of a suicidal attempt, and then came under mental observation. It seemed that he had been drinking heavily, and, at the time that I first saw him, some three or four weeks after the suicidal attempt, he showed a typical anxious depression. Being interested in psychoanalysis, I attempted a somewhat superficial analysis of the case, and the results were as follows:

The patient's parents died when he was an infant and he was reared by an aunt, a maternal type of woman. Being in moderate circumstances, she was forced to let him earn his own living at the age of fifteen. He obtained work in a distant city and was obliged to sever his home-relations. He learned photography and became a very efficient commercial photographer, later holding a government position. Soon after leaving home, he fell in with bad company and drank moderately until his marriage, at twenty-one, to a woman slightly his senior, and who also was of the maternal type. The marriage was a very happy one, as the wife was broad-minded enough to adapt herself to the husband's little peculiarities. Two girls were born to them. The wife died, twelve years after marriage, from a lingering illness. The patient was prostrated by his loss, but, later became somewhat reconciled. He placed the children with a relative. For two years, he drank heavily and his work suffered.

Then, in a boarding-house, he met Miss A, and fell in love with her. The attraction was mutual. She was about his own age and of the maternal type. The pair were inseparable for a long time, but the question of marriage was put aside, because the woman's religion was different from that of the patient's children, and these girls, now twelve and fourteen years of age, on this account voiced a vigorous objection to the marriage. During the patient's relations with Miss A, he did not drink. They were very intimate, stopping just short of actual sexual intercourse. This had an extremely bad physical effect upon the patient, and, after a time, the two decided that it would be best to sever their relations. The separation brought

great suffering to the patient, who spent whole nights pacing up and down before the home of Miss A. Again he began to drink, became depressed, and the psychosis followed.

An analysis of his dreams showed principally a repressed wish to be rid of his children, the chief bar to his marriage. The patient began to realize that, during his whole life, he had been happy when he had some woman as a mother-substitute—first, the aunt; next, the wife; finally, Miss A. As long as he had a suitable love-object, as represented by one of these women, he was efficient and happy. In the intervals when the love-object was absent, he compensated for this loss by resorting to drink. The man was partly impotent, although he admitted this rather reservedly. The fear of impotence, however, was the real reason why he had not married Miss A.

The analysis should have gone farther than this, but, the patient improved so much that he was discharged. In a few weeks, he was readmitted to the hospital afflicted with a delusional psychosis; the chief delusion being that he had killed his daughters. Hallucinations and delusions often express, symbolically or directly, repressed wishes. In the first psychosis, the desire to rid himself of his children was expressed symbolically in dreams. In the second, it was more directly expressed by the hallucination that he had actually killed his daughters.

The second psychosis was of brief duration and I lost sight of the patient for a time. A few months ago, I saw him on the street, and he showed a remarkable change for the better. Whether the insight, which he had gained from the partial analysis, had produced this result or not, I am unable to say. At any rate, he had stopped drinking for a period of many months, had given up the desire to marry, and was happy with his children, planning to give them a good education. So far as I could judge, he had made an absolutely good adjustment of his difficulties.

This case was diagnosed by the hospital-staff as being one of involution-melancholia, although I, myself, have not been able to form a definite diagnosis. I am rather of the opinion that, had the analysis been omitted, the end-result would not have been so good, for, the patient's difficulties were of a type to which it is hard to adjust oneself.

Some of these victims recover partly, sufficiently so to allow them to return to the outer world, especially if they can be placed under a certain amount of supervision. The following case is a good illustration of this:

The Case of a Paranoid Impotent

A Negro laborer of sixty-five was brought to the hospital because of his paranoid ideas. For some time, he had believed that various women were trying to interfere with him. He thought women followed him on the street, prevented him from getting on the street-cars and tried to induce him to engage in improper conduct. One day, a woman accidentally ran into him as she was hurrying to catch a car. The patient was just cutting off a chew from a plug of tobacco, and he struck the woman with his jackknife-blade, inflicting a minor injury. This incident caused his arrest, when he was placed under mental observation. Owing to his lack of education, no analysis was even attempted.

The nature of his delusions led us to suspect impotency. The impotent man is liable to believe himself the object of special interest to members of the opposite sex. Under careful questioning, the patient admitted that he had been totally impotent for several years. His wife was younger than he, and his impotence was a cause of distress to both parties. Examination made evident a slight amount of arteriosclerosis. The man was well-behaved and was gradually allowed to return to the outer world, and eventually was discharged from the hospital, retaining his paranoid ideas in full; still, he had demonstrated that he was able to make a social adjustment.

Institutional Care

The treatment of the psychoses of this period resolves itself, primarily, into institutional care. The neuroses may be treated at home; all psychoses, though, even the mild types, must be removed from the home-environment and placed in surroundings in which expert attention can be given them. The general practitioner should not attempt to treat patients of this order. For, only exceptionally has he the proper training, while, practically, he never

has the necessary time to devote to the patient. Such patients must be seen at least twice a day, and the physician must be a trained observer, able to ascertain the danger-signals, detect the necessity of change of therapeutic measures, the possibility of granting additional privileges, allowing contact with relatives, and other things. Occupation-therapy plays an important part, while hydrotherapy also is of benefit if correctly employed.

In certain selected cases, psychoanalysis can be resorted to, but, these cases represent only a small fraction of the patients seen. Careful observation, attention to the physical health, occupation and other measures that interest the patient in his environment constitute the therapy in the majority of these cases. Psychotherapy, in the form of a superficial analysis of personal difficulties, is of help in many cases not suitable for a complete analysis. Encourage the patient to talk about his difficulties and instruct him in the means of combating them in the future. With careful treatment, no small proportion of the mental illnesses of the climacteric-involution period may be materially ameliorated, even cured, and the patients restored to lives of usefulness.

Notes on the Treatment of Infectious Diseases

By OTTO LERCH, A. M., Ph. D., M. D., New Orleans Louisiana

IT often is impossible to make a correct diagnosis of an acute infectious disease, during the first few days of its course. The character of the fever curve, the exanthemas in measles, scarlatina, typhoid fever, smallpox, chickenpox and erysipelas, the state of the mind, the throat, the pulse-rate, the appearance of face and of tongue have to be observed for days. Sputum, stool, urine and blood must be repeatedly examined, sometimes, before a diagnosis can be made.

The treatment has to be commenced at once, though, and, often, it is sufficient, if the patient is seen early enough, to abort the disease before its name has been spelled or, if not, to secure a milder course.

It has long been known that the body possesses defensive provisions that protect it against disease. A sound and healthy mucous membrane and a healthy, unbroken skin prevent microorganisms from entering, while the blood defends the body with all its qualities when bacteria and toxins have entered.

All organs, the sexual organs included, make blood and distribute it and, in their turn, need pure blood to function well. Every cell sends something into the blood to make it perfect. "Blood[1] carries nourishment to every cell of the body to select from for its own proper use, and, in return, carries away waste matters to be excreted by way of lungs, kidneys and skin. It contains the means of defense against an invasion of microorganisms and toxins, and, when injury is done, it carries the means of repair wherever they are needed. Blood knits the broken bone, heals the wound and repairs injury done to organs and tissues."

To purify the blood and bring it where it is needed is, to strengthen resistance and increase the defenses the organism possesses. *Nature cures with hyperemia.*

The Importance of Rest

One of the most important measures to assist nature in her efforts to cure is, rest in the recumbent position, rest in bed, rest of mind and body. Too often, this is neglected and, when seen in the office or at his residence, the patient is given some remedy with the hope that it will cure. Frequently, the patient gets well. Nature repairs during sleep; the doctor and his remedy get the credit. However, there are many instances when the hours of sleep are not sufficient for cure and nobody can tell when they will be. It is well to advise rest in all cases of infection and especially during an

[1]Lerch, "Rational Therapy," The Southworth Pub. Co., Troy, N. Y., 1919, p. 1 and 2.

epidemic. Chills, fever, and pain force the patient to take to his bed, and the physician's advice is not needed when the disease has advanced that far. Nature herself has then taken care of that part of the treatment. Mental rest is of equal importance. Fear and fright disturb the circulation and, during an epidemic, this often is sufficient to lower resistance, to cause infection and prevent recovery.

Rest in the recumbent posture eases the circulation, the work of the heart against gravity ceases, it beats more slowly and with less force, congested organs empty themselves, and the capillaries of the skin, surrounded by a layer of warm air, widen and draw the blood to the surface. **The equilibrium** between the venous and arterial circulations is restored, *the blood is retained in the damaged tissues and organs, and repair is commenced.*

The Sick-Room

It goes without saying that the sick-room has to be well selected and that the patient is provided with plenty of fresh air and protected from drafts. Without fresh air, recovery will be difficult.

The temperature of the room should be between 60° and 70° F., although the patient's wishes and comfort may be consulted. The thermometer is best fastened to the bedpost, at a level with his face.

Personal Hygiene

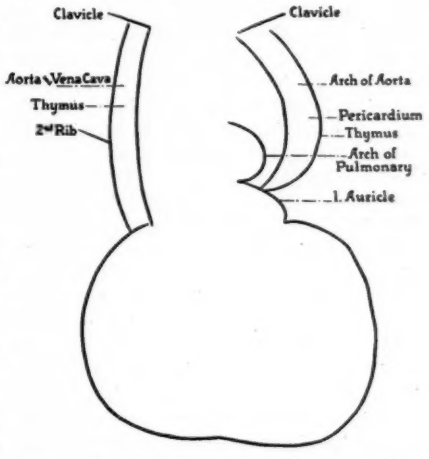
Skin and mucous membrane have to be carefully examined and cleaned, and kept clean. Mouth and bowels need attention in every case. Nose and throat have to be washed and sprayed with a solution of salt, or, bicarbonate of sodium, a teaspoonful to the pint, will serve the purpose.

The tongue has to be cleaned, if coated, and the teeth thoroughly brushed, and this has to be done several times a day, **especially after eating.** In febrile diseases which demand a liquid, or semisolid diet, the mouth, if not thoroughly cleansed, becomes an incubator of pathogenic bacteria, pneumonia and tuberculosis may follow grip, typhoid fever and malaria; and articular rheumatism may follow tonsillitis, while the diseases of the gastrointestinal tract as well as various organic diseases not rarely are due to a bad mouth hygiene.

Enemas and Purgatives

If the disease commences with a chill, as is usually the case, the blood is central, the skin cold and clammy and the body temperature high. There is no better way to correct the faulty circulation than an enema followed by a free purgation (calomel) and a hot mustard footbath, with an icebag to the head. The chill ceases, the body surface becomes warm, the blood, cooled at the surface, returns cool; the temperature sinks and the dilated heart contracts to normal size and regains strength; high blood pressure is lowered. With clean bowels, the patient feels more comfortable and has a better chance to recover.

Strict attention to the bowels is necessary during the course of the disease. Enemas alternating with mild saline purgatives have to keep them clean. If the heart shows signs of dilation and weakening, calomel followed by a saline purgative has to be administered again to empty the liver and equalize the circulation. The heart, then, will contract promptly; the dose acts like blood letting.



Mr. J. Saloon Keeper, heavy drinker and smoker, was seen Nov. 8, 1917. Complained of dizziness and cough and shortness of breath.

Diagnosis — Interstitial Nephritis — Myocarditis — Heart in Diastole.

Topical Applications

If signs of lung involvement are present with pain in the side, and cough, a mustard poultice, or jacket, hot fomentations, antiphlogistine or some other hot kaolin paste should be applied to back and side of chest, which will afford relief. If the patient is young and robust and the temperature is high, an icebag may be used instead, the

skin being protected by flannel and the ice-bag removed from time to time.

A prolonged application of a counterirritant produces widening of the vessels to a considerable depth and a slowed and deepened respiration. *Nature cures with hyperemia.* If nausea has been present, it, usually, has ceased when these various measures have been employed; but, if not, small pieces of crushed ice by mouth and a mustard plaster or poultice over the pit of the stomach often will stop it.

The Question of Diet

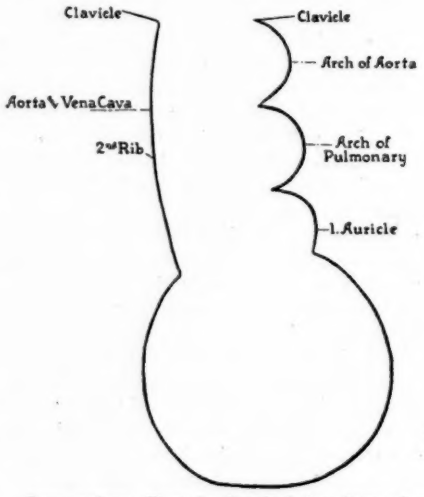
If the disease is of short duration, like grip and pneumonia, and the patient in a fairly good state of nutrition, little attention need be paid to the diet. In diseases of longer duration and in convalescence, the diet is of great importance.

At the beginning of any infectious disease with symptoms of intoxication, nausea, and loss of appetite, it is useless and dangerous to force the patient to eat. It is best to withdraw all food, if necessary, for several days after which the appetite will return, and, then, one should commence cautiously to feed the patient. The whole organism needs rest at this time, and the large amount of blood which is necessary to produce the gastric and intestinal juices of even a light meal to digest, will be drawn from places where it is needed for repairs. The whole circulation will be seriously disturbed and a heavier meal, even during convalescence, may cause relapse and death.

During the course of the disease, large amounts of liquids are indicated in order to dilute the blood and protect the kidneys; for the same reason, irritating substances, like condiments, pepper, and salt must be used with discretion. Coffee, tea, and alcohol may be given as tonics. Alcohol is an excellent vasodilator. It serves as food and seems to increase the resistance against bacterial toxins. It should never be withdrawn from a patient who has been accustomed to its use.

Food has to be given in liquid form and fruit juices added to allay thirst. If patients object to larger quantities of liquid, it may be given as enema or by way of proctoclysis, in the form of physiologic salt solution. If the kidneys are affected, salt must be replaced by sugar of milk. If heart and kidneys are damaged, the amount of liquid given must be guided by the quantity of urine voided. Milk is an excellent food in febrile diseases, but, it becomes monotonous if the disease is of longer duration. Most patients like milk, for some time at least, and it may be given in many forms, such as dried, as milk-jelly or buttermilk. Coffee, tea, cocoa, and limewater may be added to milk to overcome aversion to its odor and taste. The nutritive value of milk may be enhanced by adding yolk of egg, cream, and butter, and it may be served in the form of soup and flavored to suit the taste. The patient has to take at least two quarts of milk to get the sufficient amount of calories, which is an advantage on account of the large amount of water he takes with his diet.

Freshly pressed fruit-juices always are useful, agreeable, and well-liked. Beef-tea and the commercial articles of beef-juice serve as appetizers and stimulants and may be enriched with yolk of egg, egg-albumin and cereals cooked for several hours. If the meat-extracts are contraindicated, wine, soups and wine-jellies may be given. They are refreshing and, usually, liked by the patient. Eggs may be given as white of egg in water, egg and sherry, yolk of egg with claret and sugar, egg beaten up to foam with orange juice, and so on. To this, the various meat-, fruit-, and wine-jellies may be added. They are cooling and refreshing and furnish a valuable addition to the fever diet. In some cases, rectal feeding may



Same patient. Heart in diastole 8 days later, after 2 purgations.

Both diagrams obtained by Lerch's "Drop" method of percussion.

have to be adopted for some time. A semisolid diet should be adopted gradually only, and, by testing each new addition, the normal diet be resumed finally.

Hydrotherapy

Hydrotherapeutic measures always are useful in the treatment of the acute infectious diseases. They are the supreme remedy to lower a fever-temperature and to hold in check disagreeable and dangerous symptoms due to the infection. Fever patients regulate their temperature, though not as well as do the healthy. During the bath, the blood is cooled at the periphery and returns to the center, friction then draws another supply to the periphery to be cooled and to return. The circulation, seriously affected, owing to vasomotor paresis, is improved by the cold bath. Peripheral vessels contract and the blood is driven through the anemic organs, deepening the respiration, slowing and strengthening the pulse, increasing the diuresis, washing and freeing the tissues from toxic substances and eliminating them through lungs, kidneys and skin. Peristalsis is increased and the bowels emptied. Cyanosis disappears, the tongue becomes clean and moist, a soporous condition clears and the appetite increases. Metabolism is increased, toxins are burned up, and the improved circulation makes the soil unsuitable for the growth of the pathogenic microorganisms. The composition of the blood is changed and the number of cellular elements is temporarily increased.

In directing a bath, it is necessary to individualize, not alone according to the state of the disease, but, also, with reference to the patient himself. The bath acts more powerfully upon a small, thin patient than upon one who is big and strong and well nourished, and far more upon the child than upon the adult. Most patients react well after the bath, the skin rapidly becomes warm and red; they feel refreshed and ask for a repetition. With some, the reaction is more difficult to obtain; they look livid and shiver, yet, the result may be good; whereas a few individuals show symptoms of collapse. Patients with seriously damaged hearts and vessels, patients that do not react after the bath, patients that show symptoms of collapse, sudden drop of temperature below the normal, fluttering pulse and cold extremities, should not be treated by this method. In any case, it is necessary to ascertain the capacity of the patient to react, before commencing the bath treatment. This is done with partial applications. Unnecessary movement should be avoided and a fever patient should never be allowed to enter the bath himself but must be lifted into the tub or a bathtub may be improvised with rubber sheet and light wooden frame upon the patient's bed. After the bath, the patient is placed on a sheet, lightly dried, and covered with blankets. Hot-water bottles are placed at the feet to prevent shivering. Patients that shiver in the bath often will do well in a carbon-dioxide bath which can readily be prepared at home with the commercial articles on the market. The bath usually is given moderately cool, from 25° to 30° C. (77° to 86° F.) and fifteen minutes in duration; or a warm bath, gradually cooled, may be given instead. When in the tub, the patient is half covered with water and constant friction is used to bring the blood to the surface. An ablution with water of 20° to 25° C. (68° to 77° F.) closes the procedure. Patients with symptoms of collapse are treated with pack, ablution, or sponging, though these measures are not as effective as the bath. Alcohol is a good vasodilator and may be given before or after the bath. Patients always feel well after it. Anybody who has ever taken it, when feeling chilly and depressed, can testify to the truth of the statement. Cloths rung out of ice water and placed over the abdomen, being renewed every five minutes, reduce fever temperature rapidly.

Biologic Remedies

As soon as the diagnosis has been made, the treatment with the biologic remedies has to be thought of. Active immunization consists of an artificially produced mild infection with living bacteria and their toxins, with dead bacteria, or with a mixture of toxin and antitoxin so prepared that the toxin is in slight excess in order to stimulate the organism to self-defense by the formation of the specific protective substances.

Active immunization has but little value for curative purposes. It is used in incipient tuberculosis. The injections produce local hyperemia and an inflammatory exudation of lymph. The leukocytes encapsulate the focus and produce an immunity against the specific toxin. Advanced stages of the disease, and mixed infections, contraindicate

the treatment. In general, vaccination protects but does not cure, according to our present knowledge.

The treatment with antitoxic serum (passive immunization) is curative in diphtheria if the injection is made early enough, that is, before the toxin is firmly anchored with the body-cells. The dosage has to be large, from 5,000 to 20,000 units. Symptoms of diphtheria appear early, and it is best to make the injection even in doubtful cases and not to wait until the bacteriological examination has confirmed the diagnosis.

In tetanus, this treatment is protective, though it should be tried even after symptoms have appeared. The newly formed toxin is neutralized. Large doses should be given. The affinity of the toxin for the antitoxin is so great that it will tear the toxins from ganglion-cells if not too firmly bound. A combination of passive and active vaccination has been used in plague for curative purposes and, though it has given but poor results, it is the best available form of treatment at present.

In typhoid fever, this treatment has never become popular.

In pneumonia, the serum is polyvalent. It increases leukocytosis and is harmless. It is effective in ulceration of the cornea.

In influenza, serum treatment has been a failure. The disease itself protects only for a very short time and even seems to predispose to further attacks. Repeated attacks have not been of infrequent occurrence, in some individuals, during one epidemic. Some observers have succeeded in producing immunity, of short duration, in animals. In meningitis, the treatment gives results if commenced early and if the injections are given directly into the spinal canal. It is useless in the subacute and chronic forms of the disease.

In tuberculosis, it has given some results in the incipient stage, but is useless in mixed infections and in advanced cases. In sepsis, puerperal fever, pyemia, erysipelas, articular rheumatism, and other diseases due to streptococcus infection, serum treatment has been tried with more or less success. [We know of successful passive immunization in acute miliary tuberculosis and in tuberculous meningitis.—Ed.]

The Drug Treatment

Drugs are necessary in every case. The cleaning of the mouth and nose with alkaline and antiseptic solutions, the dose of calomel followed by a saline purgative in the beginning of the treatment for its effect upon the circulation and the emptying of the bowels, also the treatment with purgatives and enemas to keep the intestines clean, have been mentioned. If the patient suffers from flatulence and the stools are offensive, antiseptics should be administered till the evacuations become odorless. The sulphocarbolates are effective; the sodium salt always, the zinc salt when diarrhea is present, and the lime salt when calcium is indicated. Instead, other antiseptics may be used, such as, thymol or beta-naphthol. This, being excreted by the kidneys, must be withdrawn as soon as albumin appears in the urine. Frequent examinations of the urine are necessary, therefore, during its administration. Copper sulphate or copper arsenite, iodoform, the benzoates, berberine, when the intestines are atonic. Chlorazene recently has been praised by McCready. He gives it in ½- to ¾-grain doses, using charcoal and bismuth subnitrate as vehicle.

Abdominal cramps and pains have to be controlled with atropine, hyoscyamine, or belladonna.

If the lungs are involved and the patient coughs and has difficulty to expectorate, steam inhalations to which vinegar and tincture of benzoin, tincture of iodine, creosote or other antiseptics may be added, are grateful. They free the bronchi from mucus, relax spasms, allay cough and ease pain. Oxygen inhalations are useful in pneumonia. Ammonium muriate in large doses liquifies mucus and increases the secretions. Iodine preparations are indicated in throat- and bronchial affections. Iodized calcium is effective. Codeine in small doses soothes cough and promotes freer expectoration. There is a large number of drugs from which to choose, to relax spasms, to modify the secretions, to increase expectoration or to diminish it.

The Stomach

The stomach is affected in almost every case, largely owing to the intoxication which exists. Nausea, anorexia, vomiting, and pain are the symptoms; while rest, (that is, absolute rest! withdrawal of all food, with rest in bed) usually is sufficient to restore the stomach to its normal function. If anacidity or subacidity persist, hydrochloric acid, after the meal, should be prescribed. Magnesia, soda and bismuth, one

or two hours after eating, may be ordered in hyperacidity to neutralize the excess of acid. Atropine and belladonna lessen secretion and relieve pain; they may be combined with alkalies. The bitters, quassia, condurango, nux vomica, or their active principles, quassin, condurangin and strychnine; and the digestants, pepsin and papayotin, serve to increase appetite, assist digestion and assimilation of the food. In cases of subacidity, sodium chloride, common tablesalt, added to the food is the best appetizer if it is not contraindicated.

The Liver

Due to the intoxication and the state of the circulation, the liver frequently is affected, occasionally accompanied by duodenal catarrh and jaundice. The physiologic methods, rest, diet, and hydrotherapeutic measures are sufficient to relieve the milder forms, but, drugs will have to be added to the treatment in more severe affections. Calomel is the best, though it does not increase the secretions of bile. A large amount of bile is found in the stools after a calomel purge. This is thought to be due to a reflex action upon the muscular walls of gallbladder and bileducts, as well as to pulling and tearing on these structures, resulting in an emptying of liver and gallbladder. A number of remedies may be used for the same purpose. Podophyllin, rhubarb, and aloes increase the secretion of bile. They act as purgatives and relieve congestion and torpidity of the liver. Sanguinarine increases the flow of bile and of the digestive glands in general. The bile salts are at present in great favor as cholagogs; ammonium muriate in large doses increases the secretions of all mucous membranes of the body and is an excellent remedy in torpor of the liver. Physicians practicing in the tropics claim that it prevents abscess of the liver. Juglandin increases the formation and flow of bile and the activity of the intestinal glands. *A careful selection has to be made from these and other drugs if they are needed.*

The Kidneys

The kidneys must be protected, as has been mentioned, by rest in bed, by the diet, and by large quantities of liquids given to dilute the blood. If they have become affected, the existing edema and the state of the circulatory apparatus must guide the administration of the liquids. If the congested and diseased kidneys refuse to eliminate, the retained liquid will increase the edema. Only nonirritating diuretics should be used; the tartrates and acetates of potassium and sodium, lemon juice, infusion of juniper berries and digitalis; and these only if the physiologic methods are not sufficient to relieve. Elimination through every channel is of the greatest importance.

The Circulatory Organs

The heart and circulation have to be guarded most carefully. There probably is not an infectious disease which leaves the heart intact. Some degeneration of muscular fibers will take place in every case and it is difficult to say how far the degeneration has advanced. Only carefully conducted tests of efficiency will give information which, however, should not be commenced until convalescence has well advanced. If the heart shows any signs of weakening, stimulation must be at once resorted to; camphor and caffeine for immediate effect, digitalis, strophantus and strychnine to maintain it. At the same time, vasodilators should be used freely if the arteries are contracted and tense and the skin is cold and clammy. Alcohol, nitroglycerine and the nitrites are the best for this purpose. It is useful to employ the ice-bag or the icewater coil early, in order to steady and strengthen the heart.

The Nervous System

The nervous system calls for attention, and drugs often are necessary to stimulate, or to calm, and produce sleep. Strychnine is the best and may be used freely to stimulate, while hyoscyamine and luminal-sodium are effective to calm. It is important that the patient gets a sufficient amount of sleep so as to keep up his strength. Hypnotics should be carefully selected so as not to do damage. Suggestion is always helpful. A darkened room, a quiet nurse, and the comforting and assuring words of the physician are of great help to the patient. The bath or pack frequently are sufficient to produce sleep, and I have often seen a hot footbath (given in bed, of course) followed by a sound sleep. The bromides, barbital, and many other drugs we have to select from. Morphine probably is the best and may be given occasionally without hesitation. A small dose stimulates the heart. Habituation shou'd be borne in mind.

As to the Fever

A slight temperature assists to bring about a cure and should not be interfered with

unless it becomes excessive; that is, a temperature of 102° F. or below that may be considered favorable and left alone; except in continuous fever, when an occasional break in the temperature seems to be of benefit. Hydrotherapy furnishes the best means to treat the fever, though there hardly is a physician who would like to do without the antipyretics. They are all nervines and relieve headache, muscular and joint pains and occasionally act as hypnotics, besides lowering the temperature. Aconite is indicated in the beginning of almost every case of an acute infectious disease. It relieves congestion, it bleeds the veins into the arteries, slows heart action and respiration, lowers blood pressure and temperature, dilates arteries and capillaries, increases all secretions and stops pain. Tongue and skin become moist, the amount of urine is increased and the bowel evacuations are improved. Tingling and numbness felt in tongue and finger-tips are signs of overaction. The drug then has to be discontinued till these signs disappear. It is best given in the form of the alkaloid, in minute doses repeated every hour to effect, though a reliable tincture may be used instead. We possess a large number of antipyretics; all of them, with the exception of quinine, lower the temperature by abstracting heat from the body. Quinine lowers heat-production as well. A careful selection has to be made in each case.

Specific Remedies

Of specifics, that is, drugs which destroy microorganisms without injuring the host, we have but few and the indications for their employment are clear, but they must be given in sufficient doses to exert a germicidal effect—quinine in malaria, mercury, arsenic and iodine in syphilis and, perhaps, the salicylates in articular rheumatism. Arsenic does not act in the test tube, but it does in the body fluids and is useful, not alone in syphilis but also in the chronic forms of malaria, in sleeping sickness and in many other diseases. It seems to act as a general stimulant to the internal secretions, increasing the patient's resistance and favoring the formation of antibodies.

Blood alone cures and nature cures with hyperemia. To assist nature in her efforts to cure, we must purify the blood and bring it where it is needed for defense and repair. A diagnosis is necessary to know which organ suffers and to know the character of the impurities and microbes which cause the disease; also, to employ specifics.

The Convalescence

Convalescence should be conducted with utmost care and a patient should never be allowed to return to his usual occupation until careful tests have been made and have shown that all organs are in good condition. This applies especially to heart and kidneys. If the patient is financially able, he should be advised to take a rest in the country, with change of climate; and, if poor, he should, at least, be prohibited from work until his strength has returned. These precautions may prevent serious sequels.

Therapeutic methods must be combined to get the best results. They act upon the nervous system, stimulate or slow organic activity, neutralize toxins, purify the blood and bring it wherever it is needed.

The vast majority of people get well without treatment and even in spite of treatment as long as their organs are in good condition. The aged and the chronically ill, and, especially, those with damaged urinary, circulatory, and respiratory apparatus, need treatment. A careful and exhaustive examination should be made in every case as soon as possible to secure a guide. It is not easy to determine when to interfere with nature. It is difficult to do the right thing, not too much but just enough. To do too much often is far more damaging than not to do anything at all. This requires knowledge and experience. For the very reason that so many people recover without treatment, that they recover in the hands of the experienced as well as of the beginner and the fake, it is impossible for the laity to judge and appreciate the work of the skilled and conscientious physician who must be satisfied when he has guided the patient to safety.

Can Zone-Therapy Cure Cancer?

By EDWIN F. BOWERS, M. D., New York City

Author of "Alcohol: Its Influence on Mind and Body"; "Bathing for Health", etc.

DR. Henry Smith Williams, of New York, and I had a very interesting little chat, a few weeks ago, with a lady, who was wearing a moderately tight rubber band around one wrist, and who, as she told us, was accustomed to slip, at intervals throughout the day, some spiral-spring rings over two or three fingers of her right hand—"just to make sure that it wouldn't come back."

This lady, according to the prognosis of two of the most eminent cancer-specialists in the country, should have been thoroughly and definitely dead a year ago, as a result of what the specialists pronounced a cancer that involved her right breast, the axilla, and the glands of the neck.

One of these surgeons thought so little of this woman's chances of ever coming out of the operation alive (she was all prepared and on the table for operation at the time) that he bundled her off to a New York man of international reputation as a cancer-expert—for moral support as to the advisability of his even attempting an operation under the desperate conditions existing. This was Dr. Wm. B. Coley, who will no doubt, recall this interesting case.

This surgeon, after careful examination, told the husband of the patient that an operation—provided it proved successful—might promise, perhaps, two more years of life; but, that, without an operation, she could not live a year.

Gambling with imminent death, for the remote and uncertain possibility of one more year of pain-tortured life, did not seem to this very intelligent woman a prospect sufficiently alluring to be worth entertaining.

So, that same night, she disrupted the surgeon's interesting 10-o'clock appointment by taking the next train back home to Connecticut, prepared there to let the malign process do its grim worst.

Then, by one of those freak-coincidences of fortune—for, of course, *Le Bon Dieu* would have no interest in picking out, from among hundreds of thousands of equally worthy sufferers, this particular woman, for a temporary physical salvation—she met a woman who had been close enough to the clutch of the Cancer-Death to look into its bony sockets.

"Inoperable cancer of the throat," a half-dozen eminent physicians had pronounced this case. Yet, she was alive and very much well—and, according to all appearances, bade fair to remain so for some considerable time to come.

This is how the woman in Act 1 came to be wearing that rubber band on her wrist and how she came to slip on her fingers, at intervals throughout the day, those wire finger-rings.

For, these foolish-looking rubber bands and finger-rings are nothing more or less than the "home-treatment" that Dr. William H. FitzGerald, of Hartford, Connecticut, prescribes, by way of supplementing his zone-therapy pressures [piesotherapy]. And, occasionally, he even relies upon these measures to the exclusion of any other, and of all other, treatment.

This lady, however, was treated by Doctor FitzGerald with probe-pressure on the tongue, on the floor of the mouth, and in the epipharynx, through the nostril, besides other locations, the bands and rings serving as supplementary treatments. For a year, the woman reported with more or less regularity; after which time, she was discharged.

Doctor FitzGerald had not seen her for six months, until the morning when she dropped in, in response to a telephone-request from him, in order that Doctor Williams and I might look her over.

A hardly perceptible lump on the breast was all that remained of the process that, by the experts, was thought to be sufficient—and a little to spare—to give this woman her quietus within a year. She now is absolutely free from pain—the very picture of robust, blooming womanhood—and bids fair to live for forty or fifty years more—at any rate, so far as the cancer is concerned. Only the day before, she had driven her car more than a hundred miles, in order to meet her son, who had just been mustered out of the service. And a happier and more grateful woman it would

have been difficult to find in a twenty-four-hour search.

A half-hour ago, I talked with a man from New Britain, Connecticut, who, by several leading nose-and-throat surgeons of Connecticut, was declared to have incurable cancer of the throat.

For months, this man had been absolutely aphonic—could not speak above a whisper.

Yet, five months of zone-therapy treatments by Doctor FitzGerald—pressures being applied in the nose, epipharynx, and certain areas on the tongue—supplemented by "home-treatments" with a rubber band on the wrist and rings worn on all five fingers—removed every trace of this cancer process in the throat. And his voice has been completely restored—being quite as resonant as it ever has been.

This patient has gained 12 pounds in weight, and has since been seen by the two Hartford specialists—who have found the throat-involvement absolutely cleared up.

These are routine experiences in zone-therapy. They can be duplicated by any physician willing to take the trouble of familiarizing himself with the procedures.

There is no satisfactory theory to account for the *why* of these results. Still, there is plenty of evidence that there *are* results. It might be to the advantage of a hundred thousand or more cancer-patients in this country if the medical profession were to look into this matter.

Zone-therapy may *sound* foolish. But *nothing* is really foolish that relieves pain and suffering, and that actually saves human lives.

The Clean-Out Principle Applied to Roentgenology

By FRED S. O'HARA, M. D., Lieut. Col. M. R. C. Springfield Illinois

"TO GOVERN MEN, LO ALL THE SPELL I HAD
MY SOUL EVER IN THESE RUDE VESTMENTS CLAD"

SOME title! "That fellow must hate himself very thoroughly" remarks the gentle reader of these lines. But, he is missing the point. The ruddy writer once encouraged a brother M.D. to prepare a "paper" along practical lines to be read at a society meeting; said brother M.D. being a shrinking violet who had never before appeared upon rostrum nor in print. *Horribile dictu!* (which is doughboy talk for "What do you know about soap"); my protégé appeared and gave a dissertation upon "The Contemplation of Elementary Physiological Investigations of the Aberrant Rays" or words to that effect. And ruddy readers, therein lie two-thirds of the trouble with most of us. Many of us who break into print are afraid to stoop to words of one syllable and to take up the simplest subjects, in the fear that others may think us unscientific.

Just between us, there is one helofalot of things about the Roentgen ray, that are unknown to the general practitioner who, for want of a better abbreviation, will be hereinafter known as the "G. P." And, from an experience extending over twenty years, I am sure that the G. P. knows a multitude of things that are not in the lore of the specialists along various lines. Still further along the same subject, there are many things concerning the x-ray that yet baffle the most painstaking investigators who have spent their lives and part of their fingers in the work.

That gives us a fair start, to introduce a subject that is dear to the heart of every roentgenologist; but, the average operator is too busy or too modest to break into print with that which shall be the subject of my sermon.

The Clean-Out

Somewhere out of the dim past I recall some words that were arranged about like this: "Clean up, Clean out, Keep clean." To this easily remembered quotation, references will be made *ad libitum.*

In preparing a patient for Roentgen-ray examination of the abdominal contents (from the inferior surface of the diaphragm to the external sphincter of the rectum), it is seldom supererogation to

"clean out" the patient beforehand. To the patient that is not hospitalized, time may be worth considerable money and a twenty-four-hour day may easily be saved by following the directions set down here, which, I reiterate, apply to almost every condition demanding an x-ray examination of the abdominal contents.

Twenty-four hours prior to that time when the examination is to be made, give one ounce of castor oil. This, if properly prepared with "root beer" as a vehicle, will be virtually tasteless and nicely borne by almost anyone. A light supper, an enema afterward, and breakfastless to the x-ray laboratory next morning. In the event that the examination is to be of the urinary tract, it will be well to give a second enema, on the morning of the examination. The roentgenologist will do the rest.

False Calculi Explained

Now "there's a reason" for all this preparation. Not once but many times I have seen a "renal calculus" (plain as the nose upon your face in the plates made at the first examination) disappear after a thorough "cleanout" and with the "calculus" disappeared the pain that was incidental to its presence. Cogitation upon the matter convinced me that the renal stone was an opaque mass in the colon. A capsule of some bismuth salt, forgotten by the attending physician, may readily simulate a stone in the kidney or gall bladder. Not all capsules dissolve "according to Hoyle"; and when sugar coated tablets or pills are considered—those of you who have never had the experience of sugar-coated medicine passing through the entire alimentary canal unchanged, please to hold up your right hand. Aha! I thought so. That young gentleman over in the corner confesses that he has been in practice but two years and that he has never carried a stock of drugs. Also, thanks to the advice of his professor in materia medica, he always has used powder or liquid formulas.

Errors Due to Other Opaque Salts

On the subject of bismuth salts, I have suffered the humiliation of making a diagnosis of perforation of a gastric ulcer, due to a horse-dose of bismuth that had been given the patient some twelve hours before he was brought into my laboratory, in exquisite pain, that proved upon the operating table to be occasioned by a ruptured appendix. The bismuth salt sliding along the colon, coincidental with the opaque meal that I had given entering the stomach, misled me but not nearly so much as did the attending G. P_2 who assured me that he had given nothing of an opaque nature to the patient and did not remember the bismuth dose until a few days later.

A few moments' thought and the reader will clearly see how easily it would be to mistake an opaque salt in the intestinal canal for "strawberry gall bladder", ureteral calculus, kidney stone and other lesions.

Think of the position of the average kidney, in relation to the hepatic or splenic flexure of the colon, and remember that a colon filled with food (feces) generally is far more opaque to the x-rays than a colon "cleaned out and kept clean". This at once will recall those cases with classic symptoms of renal lithiasis, which were x-rayed and found negative. And, later, some surgeon took the bull by the horns, operated in spite of negative diagnosis and found a stone.

Upon this same subject, allow me to digress for one moment and state that I have seen many cases with classic symptoms of stone, that were x-ray negative even when the colon was balooned with gas. These cases, if the ureters are catheterized, will almost invariably show a germ infection of the kidney. And this fetches us back to the teeth in their role of disease causation, as described in CLINICAL MEDICINE, for August, 1919, p. 559.

When I scratch the surface of the thesis that might be written concerning the foregoing paragraph, I am sorely tempted to turn this article into a dissertation upon x-ray diagnosis of renal conditions—but that will keep, and I can "get it off my chest" at a later period. [Don't forget, please.—ED.]

A patient reporting for an examination of the stomach may possibly have a part of an undigested meal in the organ. The opaque meal rounds out the stomach and leaves a filling-defect that looks to be a serious matter, the roentgenologist not knowing the presence of other material than the meal just given. This also applies to an examination of the colon. Unless I am positive that the colon has been swept

clean, I am a wee bit bashful concerning my findings. Of course, in patients that have been prepared in the hospital for a day or so prior to the examination, more credence may be placed in the findings.

Concerning the gall-bladder and the wonderful strides that have been made toward the delineation of biliary calculi, I have every respect for the roentgenologist who is batting 100 percent in these cases, but, I still cling to my old saying "a positive finding is worth its weight in gold, but, a negative finding is not worth a farthing." To "get" gallstones, the "cleanup" should be started a couple of days in advance. I have found gallstones when they were not even suspected and have failed to show them when the symptoms were classical and subsequent operation proved their presence. But, that is the fault in construction of the stone, not the error in technic of the roentgenologist.

It would seem that there are a dozen or more things to discuss anent the preparation of a patient for x-ray work, but "efficiency" and economy of time (of the printer, the reader, and myself) bids that it be boiled down to "castor oil 24 hours in advance, and no breakfast on the morning of the x-ray seance."

The Value of X-Ray Findings

Now that we have that settled, of what value are the x-ray findings in any given case? Is it not a remarkable coincidence that simultaneously with the general use of x-rays in diagnosis, statistics show us that the civilized world is living ten years longer than did it two decades ago? Settle it for yourself, whether it is due to the "better-babies" campaign, or to the searching out of disease that is not yet incurable, by means of the Roentgen ray. Something seems to whisper that Teeth, Tonsils, Booze, and Bad Women cause most of our ailments. Booze is rapidly going out of fashion; bad women are no longer popular; tonsils are daily being ousted for their misdeeds; and teeth will henceforth be regarded with suspicion until proven innocent.

Recent literature contains some squirms to the effect that too many teeth are being sacrificed. This is probably due to gross errors of interpretation of films, but, even so, which would my ruddy reader prefer, "store" teeth or store kidneys? The dentist can fashion a fairly good artificial denture but I have never yet found an artisan who can make an artificial kidney or a heart that will function properly. Better to lose your teeth than your life, but, all of this is a side issue to the matter pertinent to the day, which is "clean them out before x-raying."

French Influence Upon Pharmacology and Toxicology

By DR. A. GABRIEL POUCHET, Paris, France

Professor to the Medical Faculty of the University of Paris. Member of the Academy of Medicine. Vice-President of the Superior Council of Public Hygiene in France.

[*Concluded from the January issue, page* 15.]

Alteratives

In the domain of mineral chemistry, the contribution of French science also is considerable. All the halogens, excepting chloride, are French discoveries, while their pharmacodynamic and therapeutic properties have been ascertained by French authors. I have already referred to the investigations of Rabuteau and Richet upon the toxicity of the mineral salts. In a thesis entitled "Experimental Studies Upon the Physiologic Effects of the Fluorides and the Metallic Substances in General," published in 1867, Rabuteau formulated the following conclusions: (1) Atomic or thermic law. The metals are the more active the higher their atomic weight or the lower their specific heat (in accordance with the law formulated in 1819 by Dulong and Petit that the atomic weight of simple substances is in inverse ratio to their specific heat): (2) The law of electivity. A sub-

stance acting upon definite anatomic elements and being in the blood-circulation influences the organs made up by these anatomic elements in proportion in which they are irrigated. But for rare exceptions of the first law, these conclusions have since been constantly verified.

Bromine, as I have already said, was discovered in 1826 by Balard. Iodine was discovered, in 1811, by Courtois, studied in 1813 by Gay-Lussac and introduced into therapeutics by Coindet, of Geneva, as well as by numerous French physicians and surgeons. Fluorine was isolated by Moissan, while its physiologic therapeutic properties were studied by Rabuteau, Armand Gautier, Albert Robin, Carles.

It would lead us too far and at the same time be tedious to give in detail the part taken by French pharmacologists in the therapeutic utilization of phosphorus, arsenic, antimony and their salts. It would be necessary almost to relate the history of therapeutics in the 17th, 18th, and 19th centuries. I shall mention only the most striking particulars in relation to a few of the remedial agents of mineral origin.

It is proper in this place to recall that osmosis was discovered, about 1750, by the Abbé Nollet. The investigations of Widal and Achard, in recent years, upon the retention of chlorides and upon chlorization are known to everybody. The hemostatic action of calcium chloride was recognized and made use of by Lafond, Grellety, Rogers, Mathieu, among others. Boric acid was employed, since 1877, by Guyon, upon the advice of Pasteur, as a vesical antiseptic. It was in France that the specific antiseptic action of this same compound upon the mushroom was recognized. The peroxides and the oxidizing medication secured by means of the persulphates form the object of the well known investigations by Lumière and Chevrotier.

As to antimony, I shall refer to the pharmacodynamic study of this emetic accomplished by Magendie. In regard to mercury, it was François Chicoyneau, chief physician to Louis XV, who was the first to maintain, in 1718, the possibility and even the advantage of treating syphilis by mercury without pushing its effect to salivation. He was the author of the socalled extinction method adopted by the Montpellier school. It is impossible to speak of mercury without making mention, at least, of the beautiful original researches of Merget concerning mercurial vapors, their diffusion, their toxic action; as well as the physiologic, toxic and therapeutic action of mercurials.

That which concerns arsenic has reference rather to toxicology, and I shall take up the subject shortly.

Modifiers of Secretions and Excretions.

Among the emetics, I must mention emetine, isolated by Pelletier and studied by Magendie; also apomorphine, which was subjected to a remarkable pharmacodynamic study of Guinard and has been mentioned when speaking of morphine.

With reference to anthelmintics, the researches of Tanret upon pelletierine and upon the other alkaloids of pomegranate are known generally.

In the group of the antiseptics, reference must be made to the studies of Berthollet, from 1783 to 1794, which have made evident the decolorizing, antiseptic and disinfectant properties of the hypochlorites; later confirmed by Percy in the service of the Rhine Army in 1793, by Messeyer, of Strassbourg, in 1809, and, finally, by Labarraque during the cholera in 1832. To this, are to be added the researches of Binet upon the comparative toxicology of the phenols and the more recent studies of Trillat upon formaldehyde.

We must also mention, in another train of ideas, the introduction into therapeutics, by Bardet, of formine which since then has reappeared under the designation of urotropine; likewise, the utilization by Albert Robin of benzoate of sodium as an eliminator of waste. Eliminative treatment has since been much developed.

Topical Irritants

It is to the studies of Bussy, in 1840, that one must refer the first scientific researches upon irritating substances. He discovered myrosine, myronate of potassium, now called sinigrine, and interpreted the mechanism of their action. The publication on the subject, by Bussy, forms the point of departure for a large number of studies upon the chemical composition of the cruciferæ which today form a decidedly homogenous group in a pharmacological aspect.

Finally, I can not pass by the studies of Moureu upon the radioactivity of mineral

waters; those of Albert Robin, and Bardet, upon colloidal metals; the investigations of Brown-Séquard that have led to opotherapy and those of Roux, Metchnikoff and their associates with reference to serotherapy.

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The methods of presenting pharmaceuticals have themselves been objects of study that have brought renown to French pharmaceutical science. I shall cite from memory, for example, the cachets of Guilliermond and Limousin, the mustard plaster of Rigollot, the "intraits" of Dausse, the governing idea of which had been followed out in the investigations made in my laboratory from the beginning of my incumbency.

Toxicology

The part played by French savants in toxicology is considerable, and it may be said that this branch of the science had its point of departure in the systematic investigations of Orfila, from 1811 to 1853. Dumas, either alone or in collaboration with Stas, is responsible for the first methods for isolating the alkaloids. The work of Tardieu and Roussin formed, in some way, a transition between this period of toxicology that was exclusively chemical and that one, more physiological, that seeks to adapt animal experimentation to the investigation of poisons. The beautiful studies of Claude Bernard, Macey, Vulpian, François-Franck, opened the way in which now the toxicologists are engaged and in which chemistry is called upon to isolate the poisons while pharmacodynamics has the task of identifying them.

The medicolegal and clinical studies of cases of poisoning owe much to French research. It is the title of one of the books through which Tardieu became famous in the field of legal medicine and this study was continued by numerous observations among which I may cite those of Bordier, Boussingault, Mayençon and Bergeret, Lechartier, and Bellamy, Gayon, Merget, upon the mercurials and those that Brouardel and myself have carried out upon chronic arsenicism, and in consequence of which we have been able to describe the process of intoxication in considering it in four periods: (1) period of digestive disturbance; (2) period of eruption and of laryngeal and bronchial catarrh; (3) period of disturbances of sensibility; (4) period of paralysis.

The study of venoms and of animal poisons has, in the last few years, been the subject of a great number of investigations. In 1862, already, Vinson had carried out interesting researches upon the venom of lepidoptera and before him, in 1810, Robiquet had isolated cantharidine and had recognized its inflammatory action. Fabre, in 1880, and Gaubert, in 1893, had studied the venom of the spiders, that of certain lepidoptera larvas was studied by Fabre, in 1898, and that of malampyrum in 1910. The venom of scorpions had, in 1675, been the object of a curious memoire by Lemery, in which one may find the trace of the first attempt of enterovaccination recently proposed by Lumière. It was again studied by Fabre, in 1880, by Joyeux-Laffuie, in 1883, Calmette, in 1895; Phisalix and Varigny, in 1896. Phisalix, together with Béhal, isolated benzoquinone from the venom of Iulus terrestris (myriapodes). I shall here call attention to the researches of Richet and Portier upon the venom of actinias which had led Charles Richet to the discovery of anaphylaxis.

The venom of batrachians, isolated in 1851 by Gratiolet and Cloez in the skin pustules, was studied in 1856 in regard to its physiological reactions, by Vulpian, in the toad, and the triton and the salamander. In 1884, Calmels called attention to the presence of isocyanacetic acid and of a methylcarbylamine in the venom of the toad. Phisalix and Mme. Phisalix resumed, about 1900, the study of the venom of the salamander, and Gabriel Bertrand, in 1894, that of the venoms of the toad.

As to snake venoms, the knowledge concerning them has been advanced much in the last years, the studies of Calmette (1892, 1899), those of Phisalix and Bertrand in 1894 already had enlightened us concerning their hemolyzing power, but it is the investigation of Delezenne, in collaboration with Mlle. Ledebt, as well as those of Delezenne and Fourneau, in 1914, which have informed us upon the mechanism of their action and the nature of the hemolyzing agent. These last experimentors have obtained an anhydride of monopalmitoglycerophosphoric ether from choline endowed with hemolyzing properties, and the studies of Fourneau and H. Page,

in 1914, likewise have shown that one could obtain chlorhydrates of palmityl and stearyl-choline whose hemolyzing power was in proportion to the molecular weight of the ethers. The production of a hemolyzing phosphatide, the result of the action of cobra venom upon the yolk of hen's eggs, permitted Delezenne and Fourneau to obtain a substance to which they have given the name lysocithine. Its hemolytic power is so great that 5 milligrams is sufficient to hemolyze almost instantaneously the blood cells of a liter of horse blood.

I shall close this review by mentioning the researches of Bottard, in 1889, upon the venoms of fish; those of Briot, in 1904, upon the venoms of the viper, and the work of A. Petit upon the toxicity of the serum of eel. Finally, I shall mention the research of Arthus, in 1911, upon antivenom.

In this study, I omitted a greater or lesser number of publications of interest, to which attention might have been called. It would be necessary to devote almost an entire conference to each of the chapters which I have rapidly passed in review. However, I have attained the object that I had set to myself if I have been able to give you in this long and doubtlessly tedious enumeration an idea of the importance of French studies in pharmacology and toxicology.

If, in referring to these studies, we have not resorted to the publicity and clamor that characterize our neighbors in the east, it is nevertheless certain that they occupy a position of prime importance, because of their application as well as because they have been a guidance to the research workers; and it is merely doing justice to their authors to make mention of them.

Instructions to the Tuberculous*

(Revised)

By SOLOMON SOLIS COHEN, M. D., Philadelphia, Pennsylvania

Professor of Clinical Medicine in Jefferson Medical College

Rest

ABSOLUTE REST is sometimes needed, and modified rest is nearly always needed, for a time, at least. Whether you see the reason for it, or not, you must obey orders.

Absolute rest means just that. No getting up. No walking around. Perhaps you may be permitted to go to the toilet, but, unless such permission is explicitly given, you should not do even that. Perhaps, you may use a commode in your room. Unless told differently, however, the safest thing is, to stay in bed and use bedpan and urinal. If in doubt, ask and get clear instructions. You may be permitted to get up to wash, but, if not told so, don't do it; stay in bed and let the nurse or your attendant sponge you.

Modified rest sometimes gives you a little more liberty, sometimes much more. You can get up to wash; to go to the toilet; perhaps for meals; or, you may be allowed to sit up so many hours a day and lie down on a couch or in bed the balance of the day. Or, you may even be permitted to walk around a little or a great deal. Obey orders as you get them, and you'll get more and more liberty as you improve. Absolute rest must be kept whenever you have a tendency to fever—that is, when your temperature, *at any time of the day*, rises or keeps up to or beyond 99.5° F. If you are sent to bed for this reason, you must *stay in bed* until your temperature has been normal, mornings, afternoons, and evenings, for *seven days* in succession. The time to look for a rise is, generally, from 12 noon to 6 p. m. Often, 2 p. m. is the most marked. *Don't take your own temperature unless ordered to do so.* If so instructed, take the observations at 12, 2, 4 and 6 o'clock. Absolute rest may be enjoined for various other reasons—weakness among them—later, modified rest may be substituted. Whichever is ordered, obey it. But,

*These are intended for the physician to hand his patient, with such verbal explanation as seems needed. The patient should be told to keep his copy all his life, "for 100 years if he lives that long"—to do daily all the things enjoined.

don't rest at the hours when you are ordered to work. *Work is a very good cure, sometimes.*

Fresh Air

Be in the fresh air as much as possible during the whole twenty-four hours, whether resting, exercising, or sleeping.

Do not be afraid of sunlight, it is good for you and kills the germs. Let it into your room, freely. If you sleep indoors, you should have a room to yourself—at the least, a bed to yourself—and you should *keep all the windows wide open,* top and bottom, no matter what the weather. In very cold or windy weather, you may arrange screens about the bed to protect you from the draft, but you must have fresh air. Some arrangements come for attachment to windows, so that one can sleep with the head out-of-doors, and the body in the bedroom. They are all right. Remember always that the only kind of air there is at night is "night air;" and *fresh night air is better than stale night air.*

Have *no heat* in the room. Sleep under as many blankets and covers as you choose. Wear a woolen cap and even gloves if necessary. Keep the body warm, but, the air entering the lungs must be cold.

When possible, it is best to sleep on a *porch* having a southern and western exposure and protected from the north and east. If a porch is not available, a *tent* may be used. The floor of the tent should be raised at least eighteen inches from the ground. It should be double, with layers of tar-paper between the boards. A trench, 18 inches deep, should be dug all around at a distance of 6 feet from the tent. There should be a platform extending out 3 feet from the walls of the tent, front and rear, with a flap that may be let down to protect one from the direct sun, if necessary. The tent should have double walls so that there can be free circulation of air even in wet weather when the flaps have to be let down. Except during storms, the flap should be open all the time to the fullest extent possible.

Bathing

1. In the morning, on rising, first bathe the *face* and *neck* with *cold water.*

2. *Sponge or spray* the body, except the head and neck, with *hot water,* as hot as can be borne, say 104° to 110° F. This should not occupy more than two or three minutes. [A hot *shower bath,* or a *quick plunge* into (and out of) a tub of hot water may be taken instead, if preferred.]

3. Then take in the hand *cold water,* say 50° to 60° F., and rub the whole body well with it. [If preferred, the body can be *sponged* with cold water, or a *shower-bath* or *spray douche* may be taken, provided the rubbing goes on during the sponge or shower; or, a cold plunge may be taken after a hot sponge or spray or shower. The thing is: *first, hot* and *then cold,* any *convenient* way.] *The rubbing is a very important part.* This cold application should not occupy more than two or three minutes, at first. Perhaps one minute will be all that can be borne. Afterward, as the reaction gets better and better, it may last three to five minutes; but, never more than five minutes at the most. The *cold water should make one feel warm,* not, cold.

4. After the cold rub, rub thoroughly dry with a Turkish towel. The skin should then be pleasantly red and glowing. This is what is meant by *reaction.* There should be a sense of warmth and refreshment.

5. In addition to this morning hot sponge and cold rub, a *tepid bath* (85° to 95° F.) for six to eight minutes, followed by a *very quick cold spray or cold rub,* may be taken just before going to bed.

Food

Take food six times daily, every third hour, usually three "meals," and milk (with or without eggs) or broth two hours later. [This may be varied by special orders according to circumstances.]

The Following Foods May be Taken:

General. Milk; meat; broths; fats; oils; fish; eggs; green vegetables; fruit; cereals; nuts; stale bread; zwieback; toast, well buttered. Water freely. Whisky or wine if ordered.

Beef and *milk* are the most important.

Milk. Be sure the milk is *pure;* if any doubt exists, *boil it.* Take at first, or as soon as you can work up to it, about 2 *quarts* daily of milk and cream, *hot* with pancreatic powder and water.* Perhaps, this may be reduced later, as you gain weight. One-half pint *cream* with Vichy water may be taken at bedtime. Kumyss.

*Put 4 tablespoonfuls (2 ounces) of cold water in a goblet or glass; dissolve in this one-quarter the contents of a peptonizing tube; add 12 tablespoonfuls (6 ounces) of warm milk; drink immediately, sipping slowly. Take 1 to 2 glasses as ordered. Milk is best taken two hours after the regular meal.

Kephir. Buttermilk. Junket. Ice cream occasionally.

Meats. *Beef, rare,* broiled or roast; hamburger steak; fine chopped, lean *beef, raw** (on bread with onions if desired); beef-juice; lamb or mutton, broiled or roasted; chops broiled; poultry stewed, broiled, or roasted; sweet-bread; calf's brain.

Broths. Any kind of clear soup: chicken, mutton, beef (with barley or rice), bean, pea. Cream of celery. Milk soups generally.

Fats and oils. Oils and fats generally. Butter, mutton fat; beef fat; olive oil; cottonseed oil; peanut oil; cod-liver oil, if desired or specially prescribed. Emulsion of fats.

Fish. Any kind of fish (socalled *shellfish* are *excluded*) except salmon—broiled, baked or stewed.

Eggs. Soft-boiled, poached, or raw between two tablespoonfuls of water. *Raw eggs, however, do not digest as well as eggs boiled for one minute.* The raw albumen is sometimes found in the stools.

Vegetables, fruits, bread, and cereals. Everything that grows over the ground. Nothing that grows under the ground except onions, and, rarely, a potato twice-baked to a dry powder. Especially take lettuce, celery, spinach, water-cress, pepper grass, onion tops, onions. Well-cooked rice and cereals (oatmeal, hominy, wheat grits, puffed wheat, cracked wheat, et cetera). Apples (preferably baked), pears, plums, grapes, peaches, melons, cherries, berries, and ripe fruits in general, *unless specially forbidden.* Zwieback, toast, pulled bread, stale bread, fresh bread, white or brown (not hot).

Drinks. A tumblerful of *hot water* one hour before each meal. Cold water freely. Mineral water as desired. Chocolate: cocoa. Coffee or tea may be taken once daily. Alcoholic beverages are to be taken *only as specially prescribed.* Milk, take freely (see above).

Don't Eat or Drink Any of the Following Things:

Anything fried. Vegetables that grow under the ground, as potatoes, turnips, carrots, et cetera (except, perhaps, a twice-baked potato occasionally). Veal; pork, ham, bacon; hash, sausage; oysters and other shell-fish, especially crab or lobster. Salmon. Rich soups, pies, puddings, pastry, cakes, hot bread. Candy, sweetmeats. Pickles. Beer and other malt liquors. Alcoholic drinks of any kind, except as prescribed.

(*Raw beef must be known to be free from tapeworm.)

Exercise

(See also *Rest.*)

No exercise is to be taken when there is fever.

The best exercise is *walking,* especially up hill, at a moderate incline.

Horseback riding is good if your strength permits.

For bicycle riding there must be special permission.

Exercise is *never to be carried to the point of fatigue.* When fatigue is impending, stop and rest. If walking home in the city, take a car within one block of home, if necessary, sooner than walk when tired.

A good way to take walking exercise is to ride out to the park, walk a short distance in the park and rest. Walk again, rest again, and so on. (Always carry sputum flask or papers. Don't spit on the pathway.)

Remember always that the way back is just as long as the way forward, and do not go too far.

While walking, *take deep breaths.*

As to "gymnastic" exercises, the advice of the physician must be obtained from time to time, according to the special circumstances. Mostly, they're bad. But when there is no fever and no softening in the lung, *breathing exercises* are good.

Breathing Exercise

There are a great many forms of breathing exercises, but the simplest is as good as any. Stand straight and stretch the arms straight out in front with the tips of the fingers meeting, then begin to *draw in the breath slowly* (inhale), and draw the arms back slowly till they are straight out from the shoulders. By this time a full breath should have been taken. A full breath means a *chest expanded* to the *utmost* both below the collar-bones and at the sides. Now *hold the breath as long as possible.* Then *let it out slowly* (exhale) and slowly reverse the previous motions of the hands and arms, bringing the hands straight out in front with the tips meet-

ing. By this time all the breath possible should have been expelled from the lungs. Then *start again to inhale slowly,* bringing the hands out as before, and so on.

The object is to *take in a breath* as *slowly* as possible; to *expand the chest as much as possible;* to *hold the breath* as *long* as possible; and then to *breathe out* as *slowly* as possible. When you can count *ten seconds* for breathing in, *ten seconds* for holding the breath, and *ten seconds* for breathing out, that will be sufficient. This can not be done at first, nor until after long practice. Make the motions at first as slowly as is comfortable, and then the time can be increased little by little and the breaths made deeper and deeper by degrees.

After two or three deep, slow breaths have been taken in succession in this way, there may be dizziness or shortness of breath. Stop the exercise, *sit down and rest* till this has passed over. Then take two or three breaths more, and so on. After two or three days, you will be able to take five or six breaths without becoming tired or short of breath or dizzy. In the course of two or three weeks, ten or fifteen breaths can be taken in succession. In this way, gradual increase can be made until fifty breaths can be taken in succession or with only a few interruptions.

At first, the exercise should be kept up for five minutes; in the course of two or three days, for six minutes; and so on, *gradually* lengthening the time until at the end of two weeks it is kept up for ten minutes. At the end of a month it can be kept up for fifteen minutes. *Don't be in a hurry.* Go easy. Increase slowly.

Breathing exercise should be done *every morning on getting up,* and *every night before going to bed.* The windows should be freely open so as to give fresh air. In addition a long breath should be taken whenever one thinks of it during the day.

If a *pneumatic resistance valve** is prescribed, use it in the breathing exercises, according to directions given by your physician.

Compressed air and *medicated inhalations* are to be used only as prescribed by your physician. *Avoid* all socalled *oxygen* or *compound oxygen* inhalations or any other kind. Unless there is some special reason for using them, they will do harm. If needed, your physician will order just what he wishes you to have.

*This is made by Codman & Shurtleff, Boston, Mass.

In the Case of Hemorrhage

1. Do not be frightened. Keep calm. Loss of blood will not kill you. Sometimes it is a good thing.

2. Go to bed or lie down at once. Keep the head slightly elevated, so that it may easily be turned to the side to allow the blood to run out, or to expectorate. It should not be lifted from this position, and no violent effort of any kind should be made. Do not cough unnecessarily.

3. The head should not be allowed to be on a level with the body; this is in order to prevent the blood running back into the throat after it comes up.

4. Do NOT TALK. Anything that *must* be said may be *whispered with the lips.*

5. Have an ice-bag applied over the bare chest in the region of the heart, also over the region of lesion, if known.

6. Keep pieces of cracked ice in the mouth constantly.

7. Swallow a few teaspoonfuls of table salt, one teaspoonful at a time, at intervals of about five minutes, say five or ten teaspoonfuls in all. This is not always necessary and may be omitted in cases of slight bleeding. In regard to medication, follow such advice as your physician may have given you previously, and, in any event, send for him at once.

8. It is permissible, and your physician will probably advise you, to take a large dose (heaping tablespoonful) of epsom salt in about one-half tumblerful of water. This may be repeated daily if necessary.

9. Only *cold food* should be taken, in the absence of special permission to the contrary. *Milk* and *buttermilk* are the best with junket, gelatin, cornstarch, or ice cream, for a change. The *quantity* should be small, about half-a-tumberful of milk every third hour, *sipped slowly.*

10. Should there be a desire to stool, it is best to use a bedpan, and to take an *injection* of about one pint of hot soapy water with a teaspoonful of oil of turpentine, in order to prevent straining. The injection should be repeated daily. *Never strain.*

11. It is important to remain at *absolute rest* until at least three days have passed without blood-spitting. Sometimes a *much longer rest* is needful. The physician's or-

ders should be followed strictly. Relapse often follows when a patient gets up or gets out too soon.*

Expectoration and Other Matters

Be careful *when, where* and *how* you spit.

You are sick because somebody else was careless about his spitting. Don't go around making others sick by the same kind of carelessness.

1. *Don't cough* unless you have something to spit out. *Don't swallow your spit.* When you cough, hold a spit cloth in front of your mouth to prevent drops of sputum from flying about.

2. Spit into a *piece of paper or cloth* about six inches square or into a *special cup. Don't spit on the floor or in the street.* Don't let your spit get on anything handled or used by other people. Don't run the risk of spreading the disease either among your own family or among strangers by neglect of these rules.

3. If you use paper or spit cloths, always have with you a number of squares the proper size. Don't use any square more than once. Fold the paper or cloth over carefully, after using it, and put it into a water-proof paper bag. Fasten the bag. When the bag is half filled, throw it into a bright fire and make sure it burns up quickly with all that is in it.

If you like it better, you can use a *paper pocket sputum-pouch* and burn it when two-thirds filled. These cost a few cents each. Or you can use a *pocket-flask* of *glass* or *metal.* These cost from thirty-five cents to two dollars. They must be kept *clean.* (See paragraph 5.)

4. If you use a tin cup, line it with paper; or you may use pressed paper-cups with covers or stiff paper-cups in a metal frame. The cup or frame should have a handle so that it can be held close to the mouth. Keep at least one inch of water and a little *chloride of lime,* or *lye* or *formalin water,* in the cup. The lime or lye is best to use with a crockery or glass cup; the formalin water with a metal or paper cup. *Keep the cup covered* and only lift the cover when you spit into it or empty it. If flies get into it, they will spread the disease. They carry the germs to food, furniture, bedding, and so forth.

To make *formalin water,* use one teaspoonful of formalin to a quart of water.

5. When the cup is half filled, take out the paper and contents. There are many ways of disposing of them: (A) Throw them into a *bright fire* and make sure they are burned. (B) Empty the cup into the *water closet,* add more lye or chloride of lime, flush out thoroughly and afterward wash the basin with scalding water and a paper swab on a long handle. *Burn the paper cup or paper lining and the paper swab. Cleanse the cup frame or porcelain glass, or metal cup with boiling water, wipe with paper and burn the paper.*

6. After spitting, wipe the mouth with paper and put the paper into the bag to be burned.

7. Squares cut from newspapers, or moderately soft manila paper, or toilet paper, may be used, but Japanese paper handkerchiefs are best. The cloths may be old muslin or old linen or cheese-cloth.

8. If you should, by accident, spit on your clothing, on the floor, on the furniture, or anywhere except into your spit cloths or paper or cup, wipe the place with paper and *burn the paper.* Afterward cleanse with boiling water and lye or formalin water or alcohol.

9. Do not wear a mustache or long beard.

10. Be sure to keep your nails clean, and *do not get sputum on your hands. Wash your hands with soap-water frequently.* Dry with paper and burn the paper. It is best not to shake hands if you are spitting much. Do not handle clothing, food, or anything else that is to be touched by other people. If such handling is unavoidable, be sure your hands and nails are clean, and rinse them in alcohol or formalin water.

11. *Don't kiss.*

12. Follow the rules given you about *open air, food, rest, exercise, breathing,* and *the free use of water outside and inside.* Don't take medicine or any other treatment except that *prescribed by the physician responsible for you.*

All advertised "cures" are humbugs or frauds.

**Note to Physicians.*—Preparations of *calcium* (e. g. bromide, hydrated chloride, lactate, lactophosphate, hypophosphite), with *codein,* or other sedative, may generally be given for three or four days in full, frequent doses. Often hypodermics of *morphin* and *atropin* are needed. Some physicians advocate nitroglycerine and amyl nitrite. The *cotarnin* salts are frequently useful. In obstinate cases, *serum* or one of the *kephalin* or blood-platelet preparations may be injected. *Thyroid* and *parathyroid* glands are among the available agents to prevent relapse. *Hydrastinine hydrochloride* and *aconite* sometimes have special indication. Less frequently, *digitalis* is called for, in an individual case for a short time; and *posterior-pituitary* preparations very occasionally.

Smallpox Conquered by Calcium Sulphide

Cupid's Conquest 'Midst a Mexican Carnival

By ROBERT GRAY, M. D., Pichucalco, Mexico

EDITORIAL COMMENT.—For many years, Doctor Gray has insisted upon the prophylactic action of calcium sulphide in preventing infectious diseases, notably smallpox. When, as happened to him, it was impossible to secure smallpox vaccine, or, when it deteriorated, owing to excessive heat, the availability of this interesting remedy constituted a valuable safeguard. As for the nonagenarian Doctor Gray's charming friendship with the fair Mexican señoritas, that simply proves again the remarkable and unusual experiences of a remarkable man.

CARNIVAL might seem a preposterous folly to a casual dispassionate observer, even in shadowy burlesque of the masquerading brillancy of that gorgeous festival, in the blighted age of prosperous luxury, here now amid the mournful wreck and ruin that gloom the brightness of the blessed sun.

Influenza

Nine years of devastation and slaughter bequeathed the havoc of influenza, too familiar to the medical minister to be recounted, other than to tell the scientific fraternity that podophyllin compound, acetanilid, veratrine, and ammonium bicarbonate compound (instead of aspirin), calcium sulphide, and calcreose crowned my treatment of more than 500 victims, without a death or a case of pneumonia, and resulting in restored health in less than half the time that other treatments required, all of which yielded sorrowful crops of mortality. As podyphyllin was employed in heroic dosage, the nux-vomica element may have been in some degree inimical to bacterial development, while persistent reduction of the fever, faithfully dominated by calcium sulphide, arrested the progress of the disease and the successfully combated involvement of the lungs brought speedy and uneventful convalescence.

Smallpox and Calcium Sulphide

Amid the spectral shadows of such ghastly reminiscences, the preparations for the festivities of the carnival had their inception and development in undemonstrative quietude. Yet, two days before the initial date, the smallpox ungraciously appeared in the barracks. Then, after proper preliminaries with the victims, I went to the houses of the girls that were the active festive pioneers and told them of the inevitable suppression of their cherished dreams. They all had the same answer: "The smallpox is in the barracks, not in the city. Keep it there and suppress it, but, touch not our festival with your infected hands."

The victims were isolated in a vacant house in the suburbs and saturated with calcium sulphide early in the evening, while all the troops received the same treatment, as did also such civilians as had chanced to be exposed. In the afternoon of the next day, the fever was down and the pustules were drying. The next morning, I had them anointed with cottonseed-oil impregnated with 20-percent of phenol; and they all were quickly disinflamed and dry. There being no new cases, the feast was left free of restrictions.

This belt of tropical Mexico has been without vaccination for four years, the interrupted communication exposing the vaccine to destructive heat on the way, some days and nights ranging from 90 to 115 degrees. Five years ago, I bought forty-dollars worth of vaccine from the makers in the United States and secured with it not one vaccination. Twice since then, calcium sulphide has saved a perilous situation, and it promises a signal triumph here now. We are in an unseasonable drouth that precludes the arrival of mail-boats. Should there be no contrary addendum to this before the mail goes out, it will evidence the positive abortion of the pestilence in this crisis. Twelve days have now passed since the appearance of this fearful disease, and no new case has developed; thus indicating that the calcium sulphide destroys the in-

fectious germs which the patients surely left among their intimate companions in the crowded barracks, as well as being prophylactic to nurses and others unavoidably exposed to the virulent disease through all its stages.

Unsettled Conditions Can Not Bar Carnival Joy

We have been breathing in acute suspense under the menacing dark pall that rolled up from the bloody conflict that occurred in the state election of Tabasco, now thirty days past, and whence a number of refugees came here in quest of safety and as yet dare not venture to return home. And more than this, rumors are rife that scattered rebel bands have collected and are concentrating to advance upon this city —an unlikely eventuality, as the place is fairly well fortified and supplied with rapid-fire guns and sufficient troops to make a promising defense.

Despite all such untoward contingencies, the masquerading processions and the sharp, crisp crackle of fireworks were in the streets at the dawn of day, ushering in the imposing spectacle of the carnival, the stouthearted lassies, who recoiled not from the frowning smallpox nor from the menace of hostile assault, glowing in brilliant ecstacies of triumph.

Eighteen years ago, I saw this enchanting feast, when it was a wonder and a show, surpassed, except possibly by New Orleans, in nothing but magnitude; for, I saw the Queen City pageant in the age of its ravishing delirium in my young years of truant indiscretion, while yet the South was an untarnished dream of immaculate beauty.

But, this quaint old city, the center of a thousand big plantations, with its capacious casino and inviting promenade around the public square, drew the beauty and grace of wealthy rural life to her carnivals—daughters of college-polish and refined elegance.

Now, undismayed, at apish distance mournfully pathetic, their daughters, whose palatial homes have tumbled amid the concussion of dynamite and whose fruitful fields are the prey of primeval forests, spurred on by the indomitable spirit of their widowed mothers, have called up from the shadowy phantoms of the abyss of oblivion their fantastical carnival, with a hope and a promise that the age of their benighting agony is nearing the dawn of an era of peaceful prosperity, which the convention of the "World Peace" should lend them in some inexplicable process—there being no faith in native volition.

It were meet and pertinent to tell my more ethical and dignified American brothers that these fair young beauties—exotic flowers of this eternal summer—were babes in my age of sleepless activity among the rural plantations; and some of them are as fast and firm friends as they were when fondled on my knee in that lovely age of joyful country life; and their city sisters, though strangers when these two years of their refuge among them began, are as lavish of their luxuriant friendship as were the delicate rural buds under the care of my watchful eye.

The Fair Mexican Maidens

I have told you all of the spontaneous solicitude and beautiful care of these lovely spirits of the carnival when my life seemed in jeopardy from a wound in the head. Hence, it should not surprise you to hear that Madam Rumor names ten of them as my sweethearts, because I sometimes visit them when there are no patients to see.

You may not believe that I am the picture of a young man in every way, except in hair and beard, presenting no semblance of decrepitude to the public eye. Yet, I am a careless customer of the barber, whom I did visit the day before the carnival began. Then the girls greeted me, with: "Shame on you, doctor, with your pretense of ninety years, when you might pass for forty or fifty at most." I often wonder whether this cheerful atmosphere amid romantic beauty does not check the ravages of the destructive hand of Time. I tell the pretty lassies, when they extend the warm hand of welcome, that they are each lending me a Gram of electricity, to freshen and lengthen my ebbing days.

And, such is the current of sweet dreamy life. How can so many of you have the heart to invite me to leave these ambrosial banquets of the land of the sun, and change the sweet early morning breath of the zephyr fresh on my cheek, for the chill of your frosty window-panes?

But, do not imagine that coquetry and practical lovemaking are absent from the legitimate routine of carnival; for, those big black eyes, sparkling the dreamy incandescence of love-light, are not idle; and wo be to the heart of the unsophisticated youth whose eyes a pair of them may

chance to transfix for fifteen minutes, while the trained battery fires Cupid's darts with effective accuracy.

A California doctor, Ernest Gray by name, drifted in here from some hapless shipwreck, attended a family, on a nearby plantation, in the influenza, this family being my next-door neighbor in carnival. One of the family, Miss Chonita, a rather special friend of mine, with whom I have passed many pleasant moments, had magnetic attractions, I early found, for this medical wayfarer from California. I quickly diagnosed an acute infection, but, this he lamely attempted to deny. His visits summed three or more a day, while he danced most of the turns of the nightly balls with her. In the meantime, the uninitiated deemed my apparently assiduous attentions as serious. Hence, the report went abroad that the girl possessed a magnetic winning eye that is unknown to the city lassies, being able to make the conquest of two doctor strangers, one of them even with one foot in the grave. Chonita's most intimate friend had once been a reputed favorite of mine; even though my shadow had seldom darkened the door of her home since the gloom of the influenza has vanished, albeit—for no unpleasant reason.

However, that charming young beauty, the queenly queen of the carnival, became strangely blended in my checkered career. If not a born American-hater, she was a constitutional one, and a princess in the Germanophile propaganda. She was, and is, a breathing symbol of my lost Carrie, over whose grave the sods of the valley were not dry when I returned from the civil war, as I have told before. Maybe that typical resemblance lent to the young Mexican belle an attractive prejudice in the dreary solitude of my orphanage of the heart, her antagonistic predilections notwithstanding. Her blighting sentiments were ever powerless to precipitate me into a quarrel.

My friend, Chonita, told me fairy-tales about the loves of our mutual friend; and, when I was satsified that Doctor Gray, he of California, was smitten, I told her I was not going to talk with her any more, but, meant to return at once to my Camachita—Camacha being her family-name, while the suffix "ita" indicates affection in a superlative degree. Chonita and her married sister circulated my remark, and it rapidly spread.

The carnival progressed in regal splendor, in a degree that, if a party of American aviators had chanced to land, aghast with the memory of the Mexican horrors about which they had been accustomed to read, the strangers might have reluctantly disbelieved their eyes.

There were balls on two consecutive nights in the house next-door to mine, and like hilarity reigned in other private residences.

At midnight, I sallied forth to see the carnival at its climax, the last scenes of the festival. The starry vault, undimmed by a cloud fleck, spread overhead in majestic silence, the glorious dome of the tropical night. The dark casino sent forth no echo of the popular revelry. The front of the huge church, somber and mute within, was passed where, in the good old days that are dead, a thousand candles would have burned and devotional hymns sung, where the ravages of war left their bloody footprints.

I paused at a window outside the crowd in the corridor of the leading ball-room, a head above the people in front of me. The first peep within the ball-room was greeted by the crown of the Camachita, whose tall white plume towered high above other visible objects at the moment. She was gracefully dancing with one of her reputed suitors, Pepe Bustemante, a graceful young man, but, a half head shorter than his conspicuous partner. He was talking to her with the vehemence of a lawyer pleading before a judge for the life of a condemned criminal.

The dance-number quickly concluded and I was recognized by many sharp eyes within and summoned by a chorus of voices to enter. Above this noise, I heard a voice: "Your Camachita is seated near the door." Thus Chonita thrilled with her stroke of vengeance; but, only for a moment; for, quickly my Camachita extended me the soft warm hand of unshakable friendship, the conquest of one Doctor Gray being ample triumph for Chonita. She has returned to her plantation-home with that victory secure—the plighted bride of Dr. Ernest Gray—while all the little world about knows that the plighted bride of Dr. Robert Gray will clasp him in the long and dreamless sleep, up yonder on the mournful hill.

The last sentence Chonita spoke to me, when I bade her farewell, was: "Your Camachita was walking with Mr. Galan on the promenade last night," and there was a mischievous twinkle in her lustrous black

eye, as if watching for the tremor that was caused by the scorpion's sting.

The enthralment of the Californian may serve as a warning to steer clear of interior Mexican carnivals; and he has since been to the plantation three leagues away on the outside of an inferior mule to see the fair charmer, who, let me tell you, is no slouch, and second to none save the queenly queen of the carnival. The gossips now say she has me helplessly floundering in her net; and she takes revenge of the other pretty girls by telling them that a country girl charmed the Californian from their midst, and that they had been unable to magnetize the more appreciable Dr. Gray who had the manly courage to name her, another country girl, his Camachita, in the face of all the hilarity of the carnival.

These trivial incidents are the spice of life amid the gloom and misery that death and ruin have bequeathed to these hapless people. You may remember, in Roman history, that an officer riding with Cæsar through a country village asked him if he supposed there were hotly contested elections in such insignificant places. "Why not? I would rather be the first man here than the second in Rome" was the reply. And I would not exchange my place here for the position of an unknown cipher in a big city. It incites a thrill of proud vanity that the belle of the district is my reputed sweetheart, an imputation she is not ashamed to hear, however remote the realty is from her dreams. I tell her that, were I back to thirty-five years, I would contest the prize with a whole battalion of suitors "and, maybe, lose it" she archly replies. Such has been the reward of many a candidate, the family being one of the richest in the department before the revolution and refuging ever since. The big herds of cattle, mules and sheep have disappeared, while the cacao plantations are grown up in forest, the vast rubber wildernesses alone being intact but useless as there has been no year in which the rebels permitted harvesting.

There are four brothers, all men, one married. The girl has two married sisters and her widowed mother, and one unmarried sister. They own their home here. The rebels have ever sought the men to seek ransoms. This is something of a fair average portrait of wealthy plantation owners. The unmarried sister is the plighted bride of a man in exile in the United States. The brothers have escaped political persecution by taking refuge in garrisoned cities, paying their contributions and keeping out of politics, though never friends of any administration or rebel party. Thus, circumstances have made hypocrisy a virtue ruled by necessity.

We have some little hope that the bloody convulsion of the election in the state of Tabasco, on the second of February and not yet settled, may precipitate foreign intervention, when the final touch is being put in Europe. We have had no mail nor been able to send out any since that hapless occurrence, due in some measure to want of water for navigation in the river, but, also, it is supposed, because the authorities did not relish free communication. There may be a mail out today which will take this. There is one trying to come up now, a little more rain may help to pass. We have never been without transportation for want of water in February before in my time; and there are no mules to carry freight by land.

What Others are Doing

MILD GLYCOSURIA

Every physician, who makes a practice of examining the urine of his patients, will often find a small amount of sugar. Has the patient a mild diabetes? Upon the answer to that question depends the future welfare of his patient.

In an article, in *The Canadian Medical Association Journal,* for November last, by Dr. Louis Hamman, of Baltimore, the clinical significance of a mild glycosuria is considered. Nearly all mild glycosurias are postprandial. In the early morning, after the night fast, the blood sugar is at a low level; after each meal, it mounts somewhat, to fall again after two or three hours. The degree to which it mounts depends upon the quantity of food that is taken, particularly upon the quantity of carbohydrates. The best time to test for sugar is two to three hours after the largest meal of the day, which, in this country, is the evening meal. The urine that is passed before retiring should be used.

It is highly important that every physician should, as a routine, direct patients to bring two separate specimens of urine, one from the night voiding and one from the morning voiding. They should, in addition, caution the patient not to urinate after the evening meal until the time for collecting the specimen arrives. Under these circumstances, sugar in the evening specimen and none in the morning indicates a mild or slight glycosuria; sugar in both, a more severe glycosuria.

Since physicians regularly use alkaline copper solutions to test for glucose, it is important, when reduction occurs, to determine whether or not the reducing substance is glucose. If the reduction is atypical, the fermentation test should be resorted to.

Sugar occurs in the urine when the blood sugar exceeds a certain high level, or when the renal permeability for glucose is increased. In normal persons, the fasting blood sugar is usually below 0.1 percent, and even after meals rich in carbohydrates seldom exceed 0.14 percent. Ordinarily, no sugar appears in the urine until the concentration of sugar in the blood exceeds 0.17 percent. Patients, therefore, who excrete sugar only when the sugar in the blood exceeds 0.17 percent, are said to have hyperglycemic glycosuria; whereas patients who excrete sugar, although the blood sugar remains considerably below 0.17 percent, are said to have renal glycosuria.

It is impossible to distinguish with certainty between hyperglycemic and renal glycosuria without studying the blood sugar. Methods of estimating blood sugar are now so simple and so accurate, that even if the physician can not make them himself, he should not have any difficulty in finding an associate to make the tests for him. A comparison of the fasting blood sugar and of the blood sugar following a meal rich in carbohydrates, taken at a time when sugar is being excreted in the urine, will usually make the distinction at once.

With the glucose-tolerance test, it is possible to differentiate between hyperglycemic and renal glycosuria. It is made as follows:

The blood sugar is collected in the morning, after the night fast, and the urine examined. Immediately thereafter, 100 Grams of glucose are administered in lemonade, and one-half hour, one hour and two hours thereafter, the blood sugar is determined and the urine examined for sugar.

Normal persons react to this test with a rapid rise in the blood sugar, which seldom exceeds 0.14 percent. The high point is usually reached at the end of one-half hour, or an hour and a half. No sugar appears in the urine.

Patients with a lowered carbohydrate tolerance, react with a much higher rise of the blood sugar and the elevation persists much longer. The blood sugar goes to 0.18 percent, or much higher, and three, four or more hours elapse before it reaches the original fasting level. When the blood

sugar exceeds 0.17 percent, sugar makes its appearance in the urine, and continues to be excreted, while the sugar is above this level and even for some time after it has fallen below the level.

The glucose-tolerance test, therefore, is a ready means of distinguishing between renal and hyperglycemic glycosuria, when only a small amount of sugar is present in the urine. If the slight glycosuria is due to increased renal permeability, the condition may be dismissed as of little practical consequence. If, on the other hand, a definite metabolic abnormality is discovered, then further study must decide whether the glycosuria indicates a mild diabetes or is a symptom of some other disorder.

There are a number of conditions beside diabetes in which occasional glycosuria is found. Chief among these are, disturbances of thyroid and hypophyseal function, hypertension, nephritis, and diseases of the brain. These diseases are characterized by hyperglycemic glycosuria. A fairly large amount of sugar in the urine is strong presumptive evidence of diabetes. Other conditions in which are found small amounts of sugar in the urine are hypothyroidism, myxedema, acromegaly, brain tumor and trauma and, sometimes, in acute nephritis.

HYPERTENSION AMONG DRAFTED MEN

A few years ago, when blood pressure readings became more or less a fad, 130 was considered the normal pressure, with a leeway of ten either way. In the last two years, 115 to 120 were declared the normal readings, for an adult in good health, between the ages of 25 and 30.

In the *California State Journal of Medicine* for October last, is an original article by Dr. Walter C. Alvarez. During the last few weeks of draft-board work, the doctor examined the blood pressure of 264 recruits, taken in the order of examination. There were 87 between the ages of 18 and 21, and 167 between 32 and 37. There were a few between 22 and 31. Although the number of cases studied is small, the results were so startling that they deserve mention.

A table is given showing the systolic pressure of 265 recruits arranged according to age. A blood pressure of 130 mm. was chosen as the dividing line between normal and abnormal.

There were more men with systolic pressures over 130 than under (201 to 64.) Of the 19-year group, there were six with pressures of 150 or over; of the 20-year group, there were 15 over 150, and 3 over 170. Three men in the 34-year group had pressures of 190, and a 36-year-old man was unaware of the fact that he had a pressure of 275.

Most of the men with low blood pressure were normal cardiovascularly, while, on the other hand, those with hypertension had other signs of heart and arterial inferiority. Many had enlarged irritable hearts, which showed poor responses to exercise; others were more or less cyanotic, and others had been rejected by recruiting officers because of questionable or evanescent murmurs.

Many of these men had cardiovascular disease due to the fact that they were a selected group of men. Many below 21 had tried to enlist and had failed. Those between 21 and 31 were caught in slacker raids and were in custody when examined.

The writer believes that if blood-pressure readings had been demanded for all recruits, the allied armies would have been spared much of their trouble with "irritable hearts". Most of the writers on the subject hardly mention blood pressure; a few state that it was normal; others dismiss the subject with the statement that it was generally higher than normal, but not enough to have any significance.

A remarkable feature observed, not only in these recruits but in scores of cases seen in practice, is that the enlargement of the heart and widening of the aorta, is out of all proportion to the amount of pressure. The x-ray will often show pronounced bulging of the arch, with pressure around 135 mm. of mercury.

A number of these men with high blood pressures had such good compensation that they could engage successfully in athletics. One man with a pressure of 145—90, a great big heart, and edema of the legs, was a professional bicycle racer.

This study has brought out the value of a hitherto almost unrecognized sign of hypertension. When these men were stripped in a cold room, the hands and legs of some of them would soon be markedly cyanotic. In some, the cyanosis of the hands was

very well marked. When this sign is present and well marked, there is almost always some abnormality of the cardio-vascular system.

"TWILIGHT SLEEP" IN GENERAL PRACTICE

In, *The Lancet,* for September 27, 1919, is an article on twilight sleep in general practice, by Dr. G. Hamilton Winch. The results of a series of 435 cases of parturition in a space of five years and two months are given. The first two years were spent in a country practice, the rest of the time in London.

The method employed was that of Gauss of Freiburg, which he called "dammerschlaf" (twilight sleep). The object of this method is to obtain not only analgesia but also amnesia, or loss of memory for recent events.

The patient is put in a room chosen for the labor. When the cervix has dilated to the extent of two fingers, the room is darkened. The patient's ears are plugged with cotton-wool to exclude all sounds. The first hypodermic is given, morphine hydrochloride gr. ¼ and scopolamine hydrobromide gr. 1/150. Freshly prepared solutions of absolutely pure drugs should be used. In twenty minutes after this injection, the patient becomes drowsy, and sleeps between the pains. Watch the patient's condition and ascultate the foetal heart sounds.

All being well, the second injection is given one hour after the first; this, and all succeeding ones, consist of scopolamine hydrobromide gr. 1/450 only. In this series of cases, he found that, these subsequent injections were required every one or two hours, the interval becoming longer as the number of injections increased.

The memory test was used to determine the depth of anesthesia. The patient's temperature was taken in the axilla, and a few minutes later a pretense of taking it in the same way was made. If on inquiry immediately after the pretended act, she did not remember the previous real act, she was deemed sufficiently under. The number of these subsequent injections is of no importance. The writer had given 14 in one case without any harmful effect.

Doctor Winch's experience is that this form of anesthesia promotes dilatation of the cervix. The second stage of labor was prolonged. Most of the delay was at the perineum and lacerations were distinctly fewer. Many cases were terminated by forceps which were used without chloroform, slowly and carefully.

A small number, 11.9 percent, were born cyanosed, and some were treated by artificial respiration. They all recovered.

"Twilight sleep," Dr. Winch concludes, is of great value in obstetric practice, provided that it is administered in strict accordance with the technic laid down by Gauss of Freiburg. It certainly saves the mother from much pain, fright, and shock. There are no ill-effects to mother or child.

The main disadvantage of the method in private practice is that it requires far more time and careful personal attention than are needed in ordinary labor cases.

During the progress of one case, in the latter part of the labor, from 7:30 p. m. onwards, one of the worst enemy air-raids over London was taking place, and some bombs were dropped within a short distance of this particular house. Careful inquiry from the patient afterwards, revealed the fact, that she did not know, until some hours after her labor was over, that an air raid had taken place. Mother and child made splendid progress, and are both now in excellent health.

CAN LOCAL ANESTHESIA ENTIRELY SUPPLANT GENERAL ANESTHESIA?

Le Monde Médical, Paris, for September last, publishes a paper by Dr. Henri Aboulker director of the Otological Service in Algiers entitled, "Local Anesthesia Applicable to all Surgical Interventions on the Neck, Head and Face."

The article is of interest for two reasons, namely, the large variety of severe operations performed by him under local anesthesia, and his simple and ingenious method of determining the exact area that is anesthetized before and during the actual operation.

In regard to the latter, the author remarks: "It is my practice to color my adrenalized solution of procaine (1 in 200) with methylene blue, sterilized at a temperature of 160°C. (320°F.) for one hour." [As it is impossible to heat water above 212° F., except under pressure, it follows that special apparatus would be required

to effect the sterilization that the author regards as essential. Unless the printer's devil has played us a trick.—ED.]

He goes on to say: "The use of the colored solution shows that all the shortcomings of local anesthesia are in reality due to technical imperfections. If we freely infiltrate the field of operation, taking care only to operate within the blue area, that is to say, in duly anesthetized tissues, we make sure of perfect anesthesia however complex the act. The surgeon must make his successive injections slowly and deliberately, then wait a minute or two, the longer the better, make his incision and, if necessary, make a further series of injections. It is this alternation of the syringe and scalpel that the average surgeon detests. He makes a hasty, inadequate injection, does not allow the necessary interval to elapse, and perhaps makes an incision that goes some distance beyond the anesthetized area. The patient complains and the surgeon incriminates the method or the chemist who prepared the solution, instead of laying the blame at his own door.

Doctor Aboulker believes that practically the whole field of surgery is amenable to local anesthesia. His own cases have been limited to the head and neck because that was his special field. The following list of some of his principal cases shows that he by no means limited himself to minor operations:

Eleven operations of trepanation of the skull with resection, puncture or incision of the brain and its envelopes.

Nineteen operations of trepanation of the frontal, ethmoidal, and maxillary sinuses.

Five operations for removal of extensive epitheliomas of the skin of the face.

Four operations for removal of epitheliomas of the skin extensively involving bone.

Twenty-seven mastoid trepanations, on several occasions with exposure of the brain or cerebellum.

Five complete petromastoid gouging operations.

Two resections of the hard and soft palate.

Ten pharyngectomies, with division of the lower jaw on several occasions.

Four operations for resection of the tongue, with partial resection of the lower jaw (twice).

Four cases of Ludwig's angina operated on by the combined buccal and submaxillary methods.

Twenty operations for removal of submaxillary and carotid lymphatic glands (the first stage in removal of epithelioma).

Eleven cases of ligature of the jugular or external carotid. (He injects under the skin and along the sheath of the vessel).

Nine laryngotomies.

One total laryngectomy.

One thymectomy.

y-five tracheotomies high up or juxtasternal.

His death rate was very much less than they are for the same operations under general anesthesia. He had 10 consecutive recoveries after pharyngectomy, which he regards as the most risky operation in surgery. Of the psychic effect he remarks:

"I cannot imagine a more impressive spectacle, for any doctor looking on, than that of such patients who, after a grave operation, get down from the table without assistance, appearing very little inconvenienced by the operation, who dress and would go back to the ward unaccompanied if that were permitted, and who are ready to take food forthwith. It is amusing to watch the stupefaction of the doctor who sees such a severe operation under local anesthesia for the first time."

Doctor Aboulker says that, occasionally, he has a little difficulty, at the beginning, with a very nervous patient. But, the promise to give a general anesthetic if he suffers pain, usually serves to quiet him until he finds that he is not really being hurt. A few asked for general anesthesia during the course of the operation, but, when questioned, admitted that they felt nothing, but were in great fear of pain. Care is always taken to cover the eyes and ears with a bandage.

Doctor Aboulker's main reason for preferring local anesthesia is his belief that many postoperative deaths attributed to shock or other causes are really due to chloroform or ether.

CŒLIAC DISEASE OR BORIC ACID POISONING

In the *Lancet* for October 25, Dr. David Forsyth refers to the "cœliac affection" (consumptive bowels, diarrhœa alba) which was first described by Gee in

1888. The disease occurs most frequently in the first five years of life and gives rise to the following distinctive symptoms: (1) a looseness of the bowels not amounting to diarrhea, the stools being bulky, pale, not watery, but, very foul-smelling; (2) a soft doughy abdomen that may be distended and rather tight; (3) emaciation with muscular weakness; and (4) pallor. The onset of the disease is gradual, though sometimes sudden. The course is always slow, running for months or years and ending either in complete recovery, partial recovery (relapses and stunted growth), or in death from some intercurrent affection.

This affection has been observed in children as early as the eighth month, and its etiology has been subject to much discussion. It was believed, by some, to stand in relation to scurvy and even to sprue, while others assumed it to be of bacterial origin, by still others a pancreatic or a hepatic deficiency were suggested as possible causes.

However, G. F. Still ("Common Disorders and Diseases of Children") evidently suspects cows' milk as a potent factor, for, he prohibits the use of all fresh cows' milk absolutely, believing that no surer method could be adopted for perpetuating the trouble than to feed the sick children with cows' milk.

By way of affording a possible explanation of cœliac disease, Doctor Forsyth reports the case of a baby girl, eight months of age, the only child of an English physician. In this little girl, cœliac disease made its appearance after a change in the milk supply, the child having at first made satisfactory progress on cows' milk after she had been weaned. On being sent away to another part of the country, she regained her health, but, on being brought home and being nourished with the same milk as before, there was a recurrence of the trouble.

This child was organically healthy. Its home environment and daily hygiene were commendable in every respect. Its food was prepared, at every stage, in a way leaving nothing open to criticism. Finally, the symptoms pointed to a mild gastro-intestinal irritation. The inference that the trouble was set up by something harmful in the milk as supplied from the dairy was rejected by the baby's father, on the plea that he had arranged for it with a neighboring dairy man and had obtained a verbal guarantee that nothing in the nature of a preservative should be used. Moreover, the milk was delivered within half an hour after each milking.

Still, on changing the milk supply, the child began to mend and gradually recovered.

A specimen of the milk having been sent for examination to the county analyst, it was found that it contained boric acid to the amount of five grains to the pint. This means, that the child had been taking 7½ to 10 grains of that preservative every day.

Doctor Forsyth suggests that this experience affords an illustration of what probably may be considered as boric-acid poisoning; also, that it throws a new light upon the experience that milk as an exclusive food in this kind of cases usually is harmful. However, it is not cows' milk as such but borated cows' milk that appears to be incriminated.

Doctor Forsyth mentions, incidentally, that boric acid was not employed as a food preservative until comparatively recent times, public attention being called to its use first in 1887. The date of Doctor Gee's paper describing the new "cœliac affection" is 1888.

While he refuses to base too wide a conclusion on the testimony of a single case, it may be claimed, in the opinion of Doctor Forsyth, that some examples, at any rate, of socalled cœliac disease are in fact cases of boric-acid poisoning. This conclusion seems to us justified and we wish to direct the attention of our readers to it. It would be interesting to know whether, in the case of certain digestive disorders in small children, especially in those in which the lower bowel is involved, a change of feeding would bring about favorable results in so far as not cows' milk as such but borated cows' milk, or cows' milk treated with any preservative whatever, is eliminated, while the pure article is permitted to be used.

CASTOR OIL IN DERMATOLOGY

The value of caster oil in dermatological practice is the subject of a communication by D. W. Montgomery (*Jour. Cutan. Dis.*, September, 1918). He points out that the oil is very heavy and resistant to changes of temperature; thus, it withstands heating

better than most oils, and only solidifies when a very low temperature is reached. Some features of importance to dermatologists are: (1) Its solubility in alcohol. Various medicated alcoholic lotions are frequently employed in the treatment of the scalp, and without the addition of a small quantity of oil the spirit would in a dry scalp dissolve out an excessive quantity of sebum. For the purpose, castor oil is the oil which is usually chosen. (2) This oil also facilitates the solution of salicylic acid in oils and ointments and, thus, renders it less irritating to the skin. The salicylic acid must first be mixed with a little hot castor oil and then added to the other ingredients. (3) Lastly, the internal administration of the oil acts particularly on the ascending colon and, as many of the more active skin reactions are caused by poisons generated in the caput coli, a favorite localization for the anaerobic proteolytic bacteria, it thus produces a clean alimentary canal, which in turn conduces to a clean cutaneous surface. (*The Prescriber.*)

POLIOMYELITIS, PNEUMONIA AND INFLUENZA

In the presidential address at the tenth Congress of American Physicians and Surgeons, Doctor Flexner reviews our knowledge of the three great epidemic diseases, poliomyelitis, streptococcus pneumonia, and influenza, which have been the cause of such extensive ravages on this continent, during the past three years. An abstract from Doctor Flexner's address is given in an editorial in *The Canadian Medical Association Journal* for November last. We quote therefrom:

Prior to 1907, poliomyelitis was of rare occurrence in the United States. Since then, there have been several outbreaks in the summer and autumn, and, in one instance, in winter. In 1916, an epidemic of great severity broke out in New York and extended to several states. The inciting microorganism was found chiefly in the nasopharynx and reaches the corresponding mucous membrane of infected individuals. There is no evidence that it is spread in any other way.

As an epidemic disease, streptococcus pneumonia is almost, if not quite, new. It appeared in 1917-1918, chiefly in military camps, in the United States and, to a less extent, in France, at the first following measles and later as a primary pneumonia, which extended to the civil population. The streptococcus hemolyticus was the microorganism almost invariably present. The virulence of this organism is developed in transfer from person to person, and is conveyed from the respiratory tract of one individual to another, and in no other way. Although differences of opinion exist as to the nature of the casual microorganism in influenza, there is no doubt that the spread of the disease is exclusively through human carriers. The malady travels at the same rate as the existing means of intercommunication, whatever the means.

In poliomyelitis and influenza, a constantly increasing number of individuals become infected before any preventive sanitary regulations are put in force. By the time that such regulations become operative, the epidemics have passed beyond control.

In the epidemic pneumonias, the infectious agents exist in the buccal, nasal and bronchial mucosa, and are disseminated in the sprayed material, thrown off by coughing, and otherwise. These organisms exist normally in the sites referred to, and their pathogenic characters in epidemics represent intensified forms of sporadic diseases ordinarily prevailing.

THE WAR HAZARD OF PHYSICIANS —AND THE PEACE HAZARD

The *P. C. A. Record* for November 1919, which is published by the Physicians' Casualty Association of America, in discussing the experience of this association during the war, comes to the surprising conclusion that, while a number of quite serious non-fatal injuries to physicians occurred while they were on active duty near the front, "the total amount of such claims during the entire war period indicated that the members exposed to the submarine and mine at sea, to the gas shells, 42-centimeters and big Berthas, while at the front, were in less danger of injury or death than the average doctor at home exposed as he is to the automobile and the streptococcus."

The sickness hazard, as shown by the experience of the Physicians' Health Association of America, a sister-organization to the Physicians' Casualty Association,

was greater in physicians in the service; but, this is not surprising upon analysis. The strenuous drill of the first few months proved very trying to some of the doctors who were a little soft physically, and many cases of illness apparently were traceable to this cause.

The conclusion as to the peace hazard of physicians is especially interesting, showing, as it does, that physicians constantly incur a good deal of danger in the exercise of their calling. That is quite understood and we are so accustomed to this fact that we have long since ceased to be worried over the medical profession being a particularly hazardous occupation.

Nevertheless, it is just as well to be careful, and especially to provide for possible contingencies. For this reason, we consider it quite proper to call the attention of physicians all over the country to the two associations referred to, seeing that these are conducted exclusively for the benefit of, and by, the physicians. The expense to the assured physicians is less than in other accident and health associations, while well established claims are paid promptly and without cavil as the present writer knows from his personal experience.

THE TREATMENT OF EMPYEMA

At the Navy Base Hospital No. 3, on the North Sea, there were twenty-eight cases of empyema occurring before, during, and after the last influenza epidemic and upon which Dr. Guy Cochran reported to the last annual meeting of the California State Medical Society (*California State Jour. Med.*, Oct., 1919).

During the epidemic of influenza, it was found that the streptococcus hæmolyticus, the pneumococcus, and the influenza bacillus all were present and the predominance of one over the others of the microorganisms determined the prognosis, for, those cases in which the streptococcus hæmolyticus predominated terminated fatally while the others ended in recovery. Among the cases of empyema, there were four with mainly hæmolyticus, the pneumococcus predominated in ten, the influenza bacillus in eleven, while in three chronic cases there was essentially a mixed infection.

The operative treatment of the empyema was done under 1-percent procaine anesthesia.

The incision was intercostal—three or four inches long, at the lowest level shown by the x-ray pictures and other findings; most commonly the eighth interspace, in the postaxillary line.

The opening through the pleura was of sufficient size for exploration and to receive a hard rubber tube, 1 centimeter in diameter, for drainage; also a smaller one alongside it through which the irrigation tube entered. Usually, one tube was sufficient by changing the position of the patient. The large drainage tube is important, for, the breaking-down fibrinous clumps would plug a smaller one.

Irrigation was given every two hours with a solution of Dakin's synthetic chlorine-carrying antiseptic, this being continued for the first few days or until pus and drainage ceased and the temperature was normal. After that, the treatments between 10 p. m. and 6 a. m. were discontinued. Still later, irrigations were given only twice a day. By this time, all tubing was withdrawn and the irrigations were done through a catheter until the smears were sterile and a reddish tinge appeared from the granulations. When that was the case, the wound was allowed to close.

No secondary closures were made.

No suction or negative pressure apparatus was used.

The patients were overfed as much as practicable. They were given no exercise beyond deep breathing, but were made to get up as early as the wound was sealed and given such work as they were able to do about the wards. There was no difficulty with lung expansion, for, the Dakin's solution dissolves the fibrin, and limiting bands do not exist.

The author lays stress upon the necessity of disturbing empyema patients as little as possible; of following a very simple technic; of the success of irrigation even in old mixed-infection cases; of feeding as much as possible; of getting the patients up as soon as the wounds are sealed; and, finally, of not losing any patients.

Let's Talk it Over

DichloramineT-Chlorcosane in Chilblains and Frosted Feet

NEARLY every physician has patients who suffer from chilblains and frosted feet, and it is one of the banes of his existence to attempt the relief of the burning and itching that tortures these sufferers from about the last week in November until late spring. No one hopes or dares to think of an absolute "cure," being thankful for even slight relief. Almost every plaster, salve, lotion, or other application, has been used with more or less success—mostly less. To enumerate the more commonly used remedies would require a very large sized book. And the fact that there are so many things recommended is sufficient evidence that they are all more or less failures.

These patients suffer mostly when the weather is moderating, and snow (if any) is melting. Then the burning, itching, and actual aching become almost unbearable. If the feet are the seat of the trouble, the sufferer can scarcely walk about, and getting his feet over a radiator is absolute torture. I have had patients without number whimper when entering a warm room after having been outdoors. It is a loss of time to advise them to wear larger shoes and not restrict the circulation; also, it is needless to lecture them on the cause of their condition. They want relief, and *pronto* at that.

I have had my share of these cases, and heretofore have used, with more or less success, an ointment of turpentine and lead carbonate. But the difficulty of making an ointment free from grit, and the fact that it must be made fresh, had much to do with my desire to try anything else that promised to give the slightest help.

Recently, after having used a solution of dichloramine-T-chlorcosane in severe scalds and burns, I determined to give it a trial in frosted feet. There is one young lady in my clientele who seems to suffer out of all proportion when there is snow on the ground. She had her feet frosted several years ago, and the tortures she suffers from chilblains are pitiful. I made up for her use a fresh solution of a level teaspoonful of dichloramine-T in one ounce of chlorcosane. This was applied warm with a gauze pad, then the entire foot swathed in plain gauze soaked in the mixed oil.

The relief was instantaneous, and in an hour we could note that the redness had faded away. There were no pain, burning or aching whatever after the first application.

I directed this patient to swathe her feet every night, which she did, making a fresh solution as needed, but using every bit of the old before making a new lot. I had been under the impression that it should be used fresh only, and that none should be used that was a day or more old. I failed to note any difference in the relief the new gave over the old. As a matter of fact, she only used four ounces altogether; but, so far, she has not had the slightest trouble, although this first case came to me the latter part of November.

Naturally, this one case brought quite a few others to my office. They were practically all alike in regard to the pain, burning, and intolerable itching. Only one case had progressed so far that the skin was broken; but, in all, *the relief was instantaneous.*

Naturally, the question arises: Will the relief be permanent? I don't know—nor do I care particularly. The first case has had no trouble so far, although we have had some severe weather, of the kind which formerly sent her to bed on account of the discomfort in her feet. The only

thing that interests me is the prompt relief my patients get from using the remedy, and when it comes right down to brass tacks, that's all that is necessary.

I use dichloramine-T, one teaspoonful to one ounce of the chlorcosane, warming the oil gently and stirring till the powder is dissolved. I use a gauze pad soaked with the solution and mop it gently all over the feet, then wrap with plain gauze moistened with it for the first hour or two. That's all that is necessary. So far, I have not failed to give prompt relief, although I can well conceive of cases that will not get any benefit. I am too old to take any stock in any "sure cure for all". However, until I find one, I am going to use this dichloramine-T-chlorcosane solution as one of the best remedies I have ever found.

A. F. SCHELLSCHMIDT.

Red Bud, Illinois.

VINCENT'S ANGINA TREATED WITH CHLORAZENE

I am enclosing herewith two case reports of Vincent's angina, recently seen in my practice, together with some notes on my treatment and the results thereof. In both of these cases, the characteristic fusiform bacillus was found. I was able to demonstrate spirochetes in the first case but not in the second.

Case 1.—R. C. Age 44, American farmer, married, somewhat neurotic temperament. Fifth day of illness. Patient had received 7,000 units of diphtheria antitoxin. Temperature of patient in axilla, 97.5° F., pulse 74, tongue swollen, protruding and immobile. Jaws almost fixed, fortunately open about one inch. Tonsils, fauces and roof of mouth were covered with a glistening white membrane extending into the nasal cavity and covering the sides of the tongue as far forward as the bicuspid teeth. The patient complained of severe pain in throat, tongue and neck.

A careful toilet of the oral cavity was made with hydrogen peroxide and alkaline elixir, equal parts, removing the membrane and leaving the mucosa covered with small discrete punched-out ulcers. These were touched with a 25-percent silver-nitrate solution, while the site of the deposit was swabbed with a 10-percent solution of the same salt. The patient then was given a calomel-and-ipecac purge followed by a saline laxative. Hourly doses of phytolaccoid and echinacoid and a gargle of alkaline elixir, 25 percent, also were ordered. The next day, the patient was unimproved, the membrane had formed again in its entirety, although it was not quite so tenacious. The treatment was the same, except that the calomel was omitted, and a 1 to 500 chlorazene spray was substituted for the alkaline gargle. After this, the membrane did not return, the ulcers healed rapidly and the glossal swelling disappeared in four days.

The patient was very weak and anemic, Tallquist test of hemoglobin showing only 60 percent, with 3,500,000 red cells. He was put on a full diet, given nucleinated phosphates and glycerinized extract of red bone marrow. Recovery was uneventful.

Case 2.—A. R. Girl, aged 10, while recovering from a mild case of influenza, developed the characteristic membrane. At the time of my first visit, this was about the size of a quarter, situated on the left tonsil and the anterior pillar of the fauces. Upon removal of the deposit, four or five small ulcers were seen which were treated with silver-nitrate solution. The patient was given a 0.2-percent solution of chlorazene to be used hourly while awake. The next morning, the throat was clean, and remained so, the spray being continued at longer intervals for two days.

I realize that two cases are not enough to base any definite conclusions on regarding treatment, but, it looks to me as if chlorazene was the curative agent here.

F. N. TOWNLEY.

Kenesaw, Nebr.

FEAR AS A CONTRIBUTING CAUSE OF DISEASE

In your December number of CLINICAL MEDICINE I noticed the discussion of various preventative means used against influenza ranging from masks to onions. I do not wish to belittle the efficacy of any of these means but desire to give a little experience along this line.

One of my two patients that died of influenza was the mother in a happy home who had attained the age of 41. She had read the newspapers and had watched the advance of this disease from the coast to her little hamlet with fear and trembling. At last she was taken down with the dread-

ed disease and when its nature was explained to her, fear and anguish were depicted in every feature. The attendants were instructed to wear masks and, when making my examination, I decorated my physiognomy with one. Every time I made a visit that same frightened look was on her face. She went from bad to worse, and the means that I had always used with such success in pneumonia had no effect whatever, on this complication. This mother, who was so much needed in her home, died. I put my mask in my pocket and vowed that I would never use one again. It is my sincere belief that the cause of this woman's death was fear and that those hideous masks certainly did not tend to relieve that condition.

It was my misfortune to have my wife in the hospital recovering from an operation when influenza was raging. Nurses were going off duty every hour with temperatures above normal. Nurses that were caring for my wife and her companion in the same room (she and a friend were operated on at the same time and shared the same room) would come in sneezing and coughing and in a few hours go off duty, ill with influenza. Patients died in rooms to the right and across the hall. I was at my wit's end what to do, for, if they had acquired this disease in their weakened condition, it would have been the matter of but a short time. Finally, a thousand calcium-sulphide tablets were obtained and instructions left to give one grain every three hours. Neither one had the disease and they left the hospital unusually early, the wounds having healed remarkably well. Was that merely a coincidence or was it calcium sulphide? I, at least, gave the latter credit, for I have seen the same thing happen before and since.

One woman came to me wanting something to prevent her taking the disease while taking care of her daughter, a school girl who was ill with influenza. I advised vaccination but she did not have time to take the three injections so, I loaded her up with the same tablets and she came through without getting the infection. Several weeks later, after she had discontinued using the tablets for a time, she and the whole family were taken down. It might have been a coincidence—I will not swear, but, I have seen so many of these coincidences that I have acquired a lot of faith in the stinking little pills. Personally, I took the vaccines and used calcium sulphide all winter and was on the job every day.

I have used these little pills as a prophylactic apparently with success in measles, scarlet fever and smallpox, but, "Just a minute," that is another story.

Port Huron, Mich. M. E. Bovee.

[There is no doubt about it that fear was a potent factor in the fatal outcome of the first case described by Doctor Bovee. It is one of the most fruitful contributory causes of disease. Further, we are convinced that Mrs. Bovee and her friend were protected by the calcium-sulphide granules that she took so generously and that the doctor himself escaped influenza, at least in part, through the same influence.

In our opinion, the fact that so many physicians acquired influenza, one year ago, and that so unusual a number of them succumbed to it, was due partially to the fear to which even they were subject and to the unreasoning terror that the epidemic had inspired in all our minds.

We are far from decrying or deprecating prophylactic methods and suitable precautions in order to protect ourselves and our charges against the acquiring of infectious diseases. Yet, we share the objection of many to the hideous masks that are worn so freely and that, we fear, often do not really protect. Indeed, we can not help but think that, occasionally, they may do the opposite. A white gown to cover the clothing, plenty of soap and water applied to hands and face, after the sick call, will go far toward preventing the physician from becoming a carrier of infection. Since beards are no longer a necessary appendage to the physician's appearance, one potent depository for noxious germs is removed. Cleanliness and a reasonable amount of time spent outdoors will go far toward eliminating danger from contact-infection.—Ed.]

AMERICAN CONGRESS OF INTERNAL MEDICINE

This organization, in conjunction with the American College of Physicians, meets at Chicago, February 23-28, 1920.

The sessions will comprise daily clinical and laboratory demonstrations in many of Chicago's leading hospitals and teaching

institutions. There will be several evening gatherings. These will be addressed by men eminent in American medicine. One of the evening meetings will embrace the Fourth Annual Convocation of the American College of Physicians.

Ethical physicians of the United States and Canada who are interested in the advancement of what is best in clinical and scientific medicine and its affiliated sciences, are cordially invited to attend all sessions of the American Congress of Internal Medicine. The gatherings will be of great practical and scientific worth.

Hotel accommodations must be spoken for at once. Detailed information with regard to headquarters, hotels, clinics, scientific demonstrations, and so forth, may be secured by addressing Dr. Frank Smithies, Secretary-General, 1002 North Dearborn St., Chicago, Illinois.

OFFICE PRACTICE

Mrs. B——, Tacoma. Mother of two, youngest 11 months; still nursing. Temperature 103.5° F. and accompanying symptoms usual with tonsillitis, of which she suffered several previous attacks. She came to see whether I could not "do something quick", at 10 a. m.

I gave glycerine and castor oil, 1 oz. of each; oil of lemon, 2 drops, the mixture to be taken at once. I told her to come back as soon as bowels moved. I also gave her one hyoscine-morphine-cactoid tablet. One hour later, the very small quantity of chloroform necessary was administered, after which I took out a pair of tonsils that had all but obstructed the pharynx and were as friable as egg shells.

At 10 o'clock, the next morning, she returned to the office, with a normal temperature and with no signs of inflammation. She left that day, by automobile, with her husband, for Tacoma, a distance of 125 miles.

Mrs. C. C., mother 24 years old. Had missed menses six times on regular dates. Had come twice irregularly. "Awful flood of stringy, foul stuff." Examination: lost-dog-and-don't-care expression and attitude; pallid skin with underlying saffron hue; feet and hands cold; pulse, 90, small regular; tongue with bluish-white coating; anorexia; breasts enlarged, painful to touch. Vaginal membrane harsh, paler than that of mouth, glistening and thin. Reddish mucus discharge from cervix. Cervix hard. Hard spot on posterior wall of uterus. Balance of uterus felt like hot water bag. Temperature 103° F.

Under the influence of a hyoscine-morphine-cactoid tablet, administered hypodermically, the curet removed a great deal of débris and pus. While curretting, I loosened something else but could not express or grasp it. One mil of pituitary solution was then injected; whereupon I removed a mass of material that surprised me—a disc of meaty tissue, ½ inch thick, evidently the pedicle for the gelatinous mass adherent to it. Apparently, there was no rupture of the surface; the substance was membranous but porous, because mucus collected on the outside when the mass was suspended. On incision, some viscid fluid escaped, leaving about 80 percent of the volume of a jelly-like substance. No evidence of an embryo. Temperature, in two hours 99.2° F. Two days later, the woman was well.

Incidentally, I will state that this patient had been "failing" since the latter half of the nursing period, approximately 18 months. Was it a polypus?

A. A. D.

——, Wash.

MATERNAL IMPRESSIONS

Reading an article in the December issue, page 863, on "Maternal Impressions," recalls a case I attended some thirty-five years ago. A lady in her first pregnancy was feeding her chickens, felt something dragging on her skirt, and, looking around, saw a large moccasin snake that had struck at her with its fangs fastened in her dress. Several months after, I attended her, and the child had on its abdomen, a perfect outline of a snake. So you call that chance?

W. S. Cline.

Woodstock, Va.

A DEFENSE OF THE AMERICAN INDIAN

I have just read the October number of Clinical Medicine and came across the articles entitled, "Adverse Views of the Red Indian." In years gone by, I had the honor

to be Agency Physician for about 1,400 Indians; my residence being about one mile from their camp or village and my work as physician bringing me in actual daily contact with them in their homes. My experience permits me to go on record, being obtained by actual observation for seven years, from 1878 to 1885, to go counter to the opinions expressed by the writer of the article referred to and to whom this is a reply.

While his assertions may be based on truth so far as his observations go, this fact should be remembered: There are different grades of Indians, just as there are different grades of whites. We can not judge the white race by the inhabitants of the slums of a great city; nor is it fair to attempt it. It is not fair to judge the American Indian by taking notice, for instance, only of the Apache. Let the examining glance take in the Sioux and others of like character, before the Indian race is condemned. I have seen the Sioux, and they surely are a magnificent people. I was associated with the Arickarees, Gros Ventres and Mandans, and my recollections of them are pleasant. Treat an Indian fairly, give him the "square deal", and, above all, be truthful with him, and he will show his good sterling qualities. Granted that his mode of living may not be all that it should be. However, if all whites are left alone to their own ideas, is their mode of living always as it should be? Was their condition ever bettered any until the law compelled improvement? I have been city physician among the tenements before taking government service among the Indians, and I can say truthfully that I saw more filth of every description among the dwellers in tenements than I ever saw among the Indians. And, remember, my observation in both cases was first-hand.

I quote. "The majority of the Pitts are infected with tuberculosis, gonorrhea, trachoma or syphilis". Are these diseases confined to the Indians? Certainly, the white race has the doubtful honor of introducing syphilis and gonorrhea among them—these diseases not being known to them in their natural state. Has tuberculosis been unknown among the whites, especially in the tenement districts? In guarding this country against the entry, through Ellis Island, of trachoma cases, is it the Indian or the Caucasian that is being watched for this infection? All these specified diseases are common among certain classes of whites; but, why condemn the entire white race? One of my experiences was gained in a two-years' service as resident physician in one of our large hospitals where there were two entire wards devoted to cases of gonorrhea and syphilis. They always were full of patients, at times were running over; and, every one of the patients was white.

Again, the Indian never has had a fair chance. He has been exploited by politics, and was the only portion of the population in all the United States that was hedged off in groups and not allowed to mingle with the people in general. There have been some sixty agencies where the different groups (tribes) have been held separately, each group being cared for by an agent appointed for a term of four years. Each agent was given his position on account of political service rendered to one or the other of the two great parties and was replaced, as a rule, every four years by the incoming administration who had political rewards to give out. Also, there were hundreds of subordinate positions to be filled at the whim of certain interested parties. The Indians were the only people in the United Sates that were treated in this manner. How could they make progress as did the other people that were allowed to go it alone and work out their own salvation? In spite of all this, they have progressed wonderfully.

However, Indian affairs are better managed now; although the narrow, political, short-sighted management persisted for more than fifty long years.

Since the Indian has been given more independence of action, since he has been treated more like other people; since he has been permitted to do business for himself and has been made a citizen of this country, with the right to vote, I think that he has shown his manhood and sterling worth, and I maintain that it is not fair to give him wholesale condemnation. Does the writer of that article *know* the Indian or has he only seen the worst side of a few unworthy individuals and then jumped to the conclusion that these individuals represent the whole race?

I quote again, "I have had no experience with reservation work, but, from what I have seen of the Klamath and Piutes that come here to gamble and otherwise kill

time several times each year, I should say that all Indians look alike". In view of the fact that the Indian race has been cooped up on reservations, and that the writer has had no experience with reservation work—what opportunity has he had of passing judgment upon the Indian race? Would he pass judgment upon the white race by the examples met, not so many years gone-by, in the characters that collected in all frontier towns? He would have seen the froth of the white race even as he acknowledges that he has seen the froth of the Indian race. Judgment would have been as fair in one place as in the other.

To repeat the writer's own words, I have "gone into the Indian's private home and viewed him at short range and learned to know him by personal contact", and I am willing to stand up for my Indian brother and call him Friend. Again I quote. "They will go and see the white doctor while there is not much the matter with them; in other circumstances they go to their own medicine-men. . . . ." However, I have treated my Indian friends for all the ailments that flesh is heir to. I have been physician, surgeon and obstetrician. As obstetrician, I was called in only when the case was difficult or dangerous. I saw and handled the only case of hourglass contraction it was ever my misfortune to see, and the patient was a fullblooded Indian woman. As a matter of course, I used chloroform, and the husband, instead of calling on the medicine-men to do the work, stood between me and half a dozen of that gentry who demanded that he allow them to care for the case, telling them he would shoot the first one who interfered with me. And he emphasized his threat by holding in his hand, at full cock, a Remington six-shot, 45-calibre revolver. He meant what he said and they knew it. Old Black Tongue was head medicine-man where I was stationed. He was a friend of mine and I cared for him through his last sickness. In his last hour, he asked me to sit by him so that he might die looking in my face. I sat there with his hand in mine until the last. I make no comment.

Thirty years after I had left the Indians, I received, through my Indian correspondent, a request from my old friend Hard Horn, that I send him some "eye medicine" for himself. And, more than once, I have been requested by my Old Indian friends to return to them and be their physician again. Does that indicate any lack of appreciation for the white doctor?

These notes are all based on first-hand information—personal knowledge of the Indian in his home, and, not on any outside accidental acquaintance with occasional specimens who showed themselves at their worst.

I quote again: "And, in your personal contact with him, you will find that the one that has been educated and returned to the tribe's camps, is by far the meanest, sneakiest, filthiest Indian in the lot". Now, I am not claiming that all Indians are 100 percent perfect. I know that some "returned" Indians failed to make good. Without going into details, though, I also know that some at least of the failures were directly due to the faulty Reservation management that I have already spoken of, and that, in most of the cases that came directly under my notice, the "returned Indian" failure was more sinned against than sinning. Following up the argument, I also knew that some white young men who have attended our colleges, have made rank failures of themselves. But, that fact does not condemn all white youth, or college education, either.

Countering on the writer's statement, I have had for a correspondent for more than twenty-five years, one of these "returned Indians" who is, today, a school superintendent among his particular people. I personally know another of these "returned" students, who farms, buys and raises cattle, and takes them by the carload to Chicago where he disposes of them. These are not isolated instances. I can cite any number of them, with names and other particulars. If our whites, in proportion to numbers, had been as truly American as were our Indians, during the last war, the government would have been swamped with the evidences of patriotism. The Indians purchased liberty bonds and war savings stamps, gave to the Red Cross and to kindred organizations, and responded to every call, giving hundreds of thousands of dollars; and their young men were in the front rank of our fighting forces across the sea, by the thousand; there were some six thousand of them.

Certainly, I believe in the Indian. Remember, he is *the* American. He was born here before the white race came here. *Give him an equal chance with foreigners,*

and he will prove himself to be just what he is—100-percent American.

JAS. L. NEAVE.

Dresden, Ohio.

LETTERS FROM FRANCE—XVII*

The committee of scientists assembled by the committee of Red Cross societies from the United States, Great Britain, France, Italy, and Japan has, after careful consideration, adopted, during its sessions at the Cercle Nautique, a formal report as follows:

"We have carefully considered the general purpose of the committee of Red Cross societies, whereby it is proposed to utilize a central organization which shall stimulate and coordinate the voluntary efforts of the peoples of the world through their respective Red Cross societies, which shall assist in promoting the development of sound measures for public health and sanitation, the welfare of children and mothers, the education and training of nurses, the control of tuberculosis, venereal diseases, malaria, and other infectious and preventable diseases, and which shall endeavor to spread the light of science and the warmth of human sympathy into every corner of the world and shall invoke, in behalf of the broadest humanity, not alone the results of science, but, the daily efforts of men and women of every country, every religion, and every race.

"We believe that the plans now being developed should at the earliest practicable moment be put into effect and placed at the disposal of the world. In no way can this be done so effectively as through the agency of the Red Cross, hitherto largely representing a movement for ameliorating the conditions of war, but, now surrounded by a new sentiment and the wide support and confidence of the peoples of the world, equipping it to promote effective measures for human betterment under conditions of peace.

"We are confident that this movement, assured, as it is, at the outset of the moral support of civilization, has in it great possibilities of adding immeasurably to the happiness and welfare of mankind."

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In addition to adopting this minute, the members of the Conference have attached their signatures individually to a longer statement embodying the foregoing conclusions. Fifty-five specialists joined in this memorandum, the American names thereto being; Dr. William H. Welch, Dr. H. M. Biggs, Dr. Edward A. Baldwin, Dr. Samuel M. Hamill, Dr. L. E. Holt, Dr. William E. Lucas, Dr. Livingston Farrand, Dr. Fritz L. Talbot, Dr. Wycliffe Rose, Col. Frederick F. Russell, Col. Hugh S. Cumming, Col. W. F. Snow, Col. Richard P. Strong, Col. R. Williams, Maj. A. H. Garvin, Col. Walker. Besides the Americans, there were such representatives of other nations as Doctor Roux, head of the Pasteur Institute; Doctor Marchiafava, of Italy, and Sir Arthur Newsholme, of England.

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The future of the human race, as represented by its greatest asset, children, was the local subject of one meeting. It was announced that the fundamental concern of the Red Cross should be, the welfare of children. All other programs now being considered, such as tuberculosis, malaria, and the cure of other diseases, are intimately connected with the welfare of the child.

Professor Pinard, of Paris, spoke on the lessons of this war anent the injurious effects on women working while pregnant. In his opinion, the mother should be free from responsibility of heavy work during the entire period.

It was evident from the discussion that work for the care of children will form a most important part of the activities to be stimulated by the newly formed international league of Red Cross societies.

Discussion of the system of visiting nurses brought forth some interesting experiences.

Reports of subcommittees were submitted on tuberculosis, malaria, and nursing. The object of all of them is, to present, in a practical, simple manner, to the people the latest and most authoritative knowledge gained by scientists.

Those who presented the reports were, Doctor Calmette, of Lille, Doctor Laveran, discoverer of the parasite that causes malaria, and Miss Stimson, president of the Nursing-Section.

The final report of the section on tuberculosis of the congress represents the unanimous conclusions of the specialists for the guidance of the world in regard to com-

*It is to be kept in mind that this letter was written several months ago.—ED.

bating tuberculosis. It will be presented to the peoples of all countries through the National Red Cross societies.

The report says that the following factors are fundamental:

1. Dispensaries on an adequate scale, furnished with laboratories and with specially trained visiting nurses, who shall carry into the homes of the patients the necessary care, instructions, and advice.
2. Careful and regular inspection of school children.
3. Hospital treatment for advanced cases.
4. Sanatorium facilities.
5. Popular education regarding tuberculosis.

The report says:

"Tuberculosis is inextricably associated with the general living- and working-conditions of the people. We recommend the encouragement of all legitimate efforts directed toward the improvement of these conditions. We regard, as of particular importance in this connection, the care of children, the problem of housing, nutrition, and alcoholism. We recommend the institution of appropriate measures to prevent the transmission of tuberculosis through infected milk. We approve the establishment of open-air schools for the accommodation of children and the extension of the open-air system to practically all places where people are segregated, such as barracks, asylums, and orphanages."

The report warns the public in regard "to the grave risk to which tuberculosis-patients are exposed through the exploitation, without scientific authority, of alleged cures"

The tuberculosis committee of the Scientific Congress of Health, under the auspices of the Red Cross Society, consists of the following:

Chairman, Professor Calmette, Drs. Bernard, Rist, Courmont, representing France: Drs. Biggs, Baldwin, Farrand, Williams, Garvin and White, representing the United States: Sir Robert Philip, Sir Arthur Newsholme, Sir John Lumsden, Dr. Menzies, representing England: Professor Marchiafava, Dr. Baduel, Dr. Poli, Professor Maragliano, representing Italy; Dr. Kabeshina, representing Japan.

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At the close of one of the conferences of the Committee of Red Cross Societies, Sir Arthur Newsholme, the head of the delegation of the British Red Cross, was asked for an expression of his opinion concerning these meetings. He said:

"This conference has been the starting point of a movement which undoubtedly will have great influence on the future of the world. I have attended every meeting of the conference, and my general impression is one of the greatest confidence in the eventual success of this movement.

"The great conception behind the conference is this; that a powerful, far-reaching and beneficent organization, born of war but essentially pacific in its objects, should not be demobilized because hostilities have ceased, but should be continued and even extended in time of peace.

"The idea is, that prevention is better than cure, and it is our intention that the organizations which have done so much to *cure* suffering during war, shall *prevent* suffering or, at least, reduce it to a minimum in time of peace. To accomplish this, it is necessary that all nations cooperate. Disease knows no frontiers. The Red Cross societies provide the machinery by means of which this international cooperation can be brought about with comparative ease and rapidity.

"It is not intended that the peacetime Red Cross societies, either in their individual capacity or as incorporated in the proposed international bureau, shall interfere in the slightest degree with the free action of any existing voluntary societies in the different countries. For instance, in Great Britain, there are, among others, the National Council for Combating Venereal Diseases, and the National Association for the Prevention of Tuberculosis, both of which are doing very good work, and peacetime Red Cross organizations would not interfere with that good work.

"The principle of a Central International Red Cross Bureau, designed to enable all the individual Red Cross societies to pull together and mutually help one another in time of peace, has been definitely accepted and the broad lines on which it should work have been laid down. It now remains to build up the necessary organization in conformity with the requirements of our common ideal."

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Sir Arthur Newsholme has been invited by the United States Government, to pro-

ceed to Washington and confer as to child-welfare work in America, attending conferences on the subject in Washington and after that in other cities. He left Brest by the Leviathan on April 15.

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The usual and inevitable protests have followed the statement by a member of the Chamber of Deputies that he had no doubt that a time would come when euthanasia would be brought about for those suffering from incurable and agonizing diseases. It is a difficult question and involves a good deal more than appears at first sight. The legal sanction of such a right might seem to open the way for fraud or, worse still, the satisfaction of personal hatred or revenge. But, fraud and malignity always can find a way, without sanction, and the criminal or homicidal doctor already has ample opportunities. Still, the actual risk in that direction is very slight, since it is obvious that the right would have to be hedged about with safeguards, such, for instance, as, that the hopelessness of the case should be attested by two or three independent consulting physicians. The clearly expressed desire of the patient is, of course, presupposed.

Do doctors, themselves, desire this sanction? I have discussed the question with various types of physicians, and I have found them reluctant to express an opinion. This is natural enough, for, the doctor is too nearly concerned to talk at large on so grave a matter.

Those who hold the Christian faith in its simplicity certainly would not desire this sanction, nor would they act upon it. Those holding it on broader grounds and regarding it as capable of individual interpretation might. It would become a matter of substituting, for the strict moral law, a principle of humanitarian ethics.

It is impossible, of course, to argue with those that believe that pain is a divinely ordained purifier of the spirit and that, therefore, it should be permitted to rack the body till the spirit leaves it. That pain has precisely the opposite effect upon many temperaments, proves to them merely that such sufferers are unregenerate. Yet, those that argue thus seldom refuse, in their own person, the temporary relief of morphine.

How many doctors would care to accept the responsibility of an act so grave, so bound up with the eternal mystery of life itself? Very few, I believe. And this taking of life for kindness' sake would have to be done by the patient's own doctor, otherwise we should have a small body of men free from moral compunction in this direction that would be willing to act as authorized slayers. Possibly, in special cases, doctors already exercise their right of individual conscience in this matter. Perhaps it had better be permitted to rest at that.

B. Sherwood-Dunn.

Paris, France.

HERPES ZOSTER—A TREATMENT THAT IS A WINNER

Several years ago, a patient of mine while under treatment for this trouble, and wearing a path between his home and my office, sought an older physician for relief, and was told he would have to grin and bear it.

More recently, I heard a patient (not mine) say he had taken daily "shots" for three weeks to overcome pain in an attack of shingles. This man's treatment speaks for itself.

My treatment of this very agonizing trouble was unsatisfactory for years, and I saw a number of cases involving areas from shoulder and arms to the hips. In my early experience I always thought of the trouble as occurring about the girdle or waist-line; but not a few cases will be seen involving the shoulders and at any line down to and including the hips. A few weeks since, a patient came to me saying he had not slept well for a week and had sores on his hip-bones. The area of the lesion was along the superior border of the right ischium. I do not think it necessary or right to give these patients morphine, or at least not until every other means of relief is exhausted. I certainly think they need help and of a radical sort. In fact, our usefulness in a large measure depends on our ability to handle the multitude of minor ailments to which the human being is heir. I have often been asked by my professional friends, "How's business?" when I could answer "fair," at a time when general health conditions were good and my brethren were saying "business is bum."

My treatment for herpes zoster is first to apply galvanism for the pain, using the

positive pole over the exit of the nerve and the negative pole at an indifferent point. I like best the large wet abdominal pad for a negative. Be sure to test your current for polarity, for, if you apply the negative pole at the nerve exit, you will aggravate your case and increase the pain. Second, I paint flexible collodion over the line of that nerve and over every lesion, doing this every day and sometimes twice a day. I put layer upon layer, and keep at it long enough to get results. It may be wise in some cases to bandage for protection from clothing, but I seldom find it necessary.

Third, I give a standard tablet of nuclein every two hours, night and day, until the patient is better and sleeps comfortably. In the use of galvanism, apply once or even twice a day until the patient is relieved of the pain. Twenty *M. A.* for twenty to thirty minutes.

I have had no failures to secure prompt relief in a few hours and entire relief in a few days.

A. T. Botts.

Decatur, Ill.

SOME PRACTICAL POINTS IN VACCINATION

After an experience of eleven years, I have come to the following conclusions about vaccination:

1. That the average vaccination immunizes longer than seven years, and that if the scar is still pitted after a much longer period, that individual is still immune even in epidemics.

2. So long as the scar has deep pits and has a decided pinkish hue, just so long is that case immune to the disease.

3. Deep scarification causes too much blood, thereby diluting the vaccine.

4. The best method of vaccination to insure uniformity of results, is as follows: Wash the part thoroughly with ordinary castile soap and water; then, wash off with clear water. Next, apply a few drops of ether, as the oil of the skin has a retarding action on the virus. This done, then take the part, usually the arm, and stretch the tissues tense. After placing a drop of the serum upon the selected spot, draw two linear marks about one-fourth of an inch long and about one-eighth of an inch apart, through this drop. Continuing to hold the tissues tense, rub the drop into the lines just made, making the tissues more tense at this time. Permit the fluid to dry. Do not apply any dressing of any kind and you can safely count on eighty percent takes if the patient has never been vaccinated before.

5. As to antiseptics, let me give a word of caution. If you use an antiseptic with too much carbolic acid, such as Synol soap, or like preparations, your results will be poor and the takes few. Such preparations seem to hold or retard the action of the virus.

6. In conclusion, I have found the best results with the above described procedure, merely having an aseptic area, so I shall proceed along the following lines until some one can suggest a better procedure.

While waiting for this better way, suppose you try the above for yourself.

R. B. Tracy.

Albuquerque, N. M.

STAMMERING

Any physician who wishes information concerning stammering is recommended to write to Dr. Elmer L. Kenyon, 104 So. Michigan Blvd., Chicago, for a copy of his pamphlet, "Stammering as a Disorder of Speech Dependent on Conditions of Child Development." This is a subject in which nearly every physician is interested, but concerning which there is very little literature available to the profession which is of substantial practical value. Doctor Kenyon is doing real, creative work along this line.

A MAN OF FIFTY—OVERWORKED

I am about fifty years of age. Am fat, short, thick-set and very strong physically. I have been engaged, for more than twenty-five years, in the active practice of medicine, as a general physician. Friend and foe will admit I have ridden as many miles as any man in the state of Maine.

A year ago, last May, I was refused a commission in the army because my urine contained albumin and some casts. I did not pay any attention to good advice but kept right on riding and overdoing. My blood pressure ran up to over 200.

On October 28, I had a uremic convulsion. At the time, I was opposite Doctor

Silsby's Hospital, conversing with him. Without any warning, I fell into his arms. Other doctors came to assist Doctor Silsby.

Convulsion followed convulsion. My urine was loaded with albumin. Of course, I was unconscious. My bowels could not be made to move. I vomited all medicines; enemas were expelled with no results.

Doctors Wasgatt and Silsby informed my wife of the seriousness of my condition and requested her consent to "blood letting". This they instituted but without measuring or weighing the amount abstracted.

After the blood letting, I had no more convulsions and my blood pressure fell to 135. In about eight hours, I knew enough to demand a hot bath. This was given me and I began to perspire.

For eighteen hours, I excreted no urine, though a catheter was passed. For four days, I was conscious only at intervals, and, then, would fall into a profound and troubled sleep.

I remained abed for two weeks, and, now, am recovering fast. My blood pressure is 135. Only a trace of albumin is present in the urine and rarely a waxy cast. I eat no meats, no eggs.

GEORGE L. CROCKETT.

Thomaston, Maine.

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[Doctor Crockett's experience contains a timely warning for the busy man, in middle age, who persists in carrying on, even though he has had admonitions in the form of danger signals, such as, urine showing albumin and casts; also, high blood pressure. The doctor evidently is full-blooded and, being a hard worker, temperamentally, probably was, likewise, an enthusiastic eater. Those things, with long-continued hard work, constant serious responsibilities and worries, incidental to a large general practice, are sure to "get" even the strongest unless an occasional halt is called. Work *may* become a vice—when it is carried to extremes.

An interesting phase in Doctor Crockett's pithy and graphic case report is, the evident and indisputable good effect of venesection. If his attendants had not abstracted a considerable quantity of blood from the overcharged circulation, the patient probably would have gone under.

Other remedies would have worked? Perhaps so, but, time was the most imperative element and forbade temporizing. Blood letting is, quite certainly, a most useful and a lifesaving procedure, under certain conditions. It fell into disrepute, deservedly so, because of terrible abuse. Yet, that does not condemn its legitimate employment.

We are glad to publish Doctor Crockett's letter and we rejoice in his recovery. Have others had such striking experiences with venesection?—ED.]

RELIEVING PAIN WITHOUT OPIUM

Referring to Doctor Blair's article, in the December number of CLINICAL MEDICINE, I will say: that physicians as a class treat pain without reference to its cause and as a routine practice. A hypodermic dose of morphine is, as Doctor Blair calls it, "a sheet anchor."

Unfortunately, this statement applies to a large portion of the "two-thirds" of the better class of physicians.

In my own practice, I do not believe that, in its fifty-three years, I have used altogether one ounce of opium or its derivatives, barring codeine, and I never have used it hypodermically.

Opium or morphine are noncurative, in my estimation, and I believe that my opinion is shared by all; they simply are a means of obtunding pain. Now, if pain is studied so as to locate its cause, the proper curative remedy can be applied with, not only, relief, but, removal of the cause within an amazingly short space of time.

How often, in the old days, have I sat at the bedside of a patient suffering from uterine colic, depending upon chloral and potassium-bromide, unsuccessfully and, finally, compelled to resort to opium, not to cure but, to relieve by obtunding the pain! Now, I simply administer hyoscyamine in proper dosage and, in ten or fifteen minutes, my patient is in comfort, a repetition of the dose not being required. This experience has been repeated three times within the past two months, while another case, and of a different type of colic came under my care within the past week. This latter attack was caused by the obstruction of the gallduct by a gallstone; the pain was relieved, in fifteen minutes, by one dose of hyoscyamine, and the parts were so relaxed that the stone passed into the bowel and was expelled, in the excreta, with the

first defecation after the administration of the medicine. I add, with absolute certainty, that hyoscyamine will give almost instantaneous relief in all forms of colic and that one dose, properly administered, is sufficient.

Again, in some forms of neuralgia, where morphine has been looked upon as the "sheet anchor", I have found that the excruciating pain not only is relieved but that the cause is eliminated by the administration of caffeine valerate.

I fully agree with Doctor Blair in all that he has said, but, he does not go far enough. His "two-thirds" should be check-reined to prevent the too handy use of the ever-present hypodermic syringe.

Doctor Calloway's treatment of his case of menorrhagia was, to my mind, correct with the exception of his continued use of hyoscyamus; I have found that one dose of hyoscyamine, to relieve the immediate cause of pain, and followed by irisoid, caulophylloid and viburnoid as a further means of preventing a return of the trouble, is absolutely efficient.

W. T. THACKERAY.

Fowlerton, Texas.

THAT HOSPITAL NUMBER

So far, we have had two responses regarding the proposed Hospital Number, one in the form of a cordial letter, the other in the form of an article from the owner of a small sanitarium. More power to him! As already said, if the readers of CLINICAL MEDICINE are interested in a hospital number, they will have to tell us so. Otherwise we shall have to give up the idea.

THE INDUSTRIAL CAMPAIGN AGAINST VENEREAL DISEASES

The heads of industries in all portions of the country have come to appreciate the direct relation between the health of their employes and the quality and quantity of their production. Particularly are they concerned with the losses incurred, by themselves and employes alike, as a result of the venereal diseases.

An indication of this is found in the fact that more than 2,000 concerns have adopted an industrial program for combating venereal diseases, which was developed by the government from its war experiences. For the purpose of carrying out this standardized program, these concerns have made allotments for the work of venereal-disease education and control, just as they would for any other efficiency problem in the plant. Many have reported that, disregarding the value of the work as it promotes health and happiness among employes, it is a paying proposition through increased efficiency.

The results attained by some of the large corporations in developing this program, in some instances, have been nothing short of remarkable.

Hopewell, Virginia, was one of the largest of our war-baby cities. Built virtually in the wilderness, its development was the result of the wonderful organizing capacity of the Du Pont Powder Company. It was found early, however, that the output was not going to come up to expectations. The exigencies of the war demanded that the planned output be turned out.

A medical examination of all employes disclosed that one in ten had a venereal disease and that sixty-eight of the non-effectives were on the absentee list for the same reason.

The major result of this investigation was, the immediate establishment of a venereal-disease clinic in the Hopewell plant. Proper treatment returned many to the effective list in a short time. Therefore, not only the government and the concern, but, the employes as well were benefited. Many had been spending large amounts for quack treatment, with but little success. For instance, an employe of the Solvay Process Company, following the advice contained on one of the bulletins of the government program, reported to the plant physician for a physical examination. He had previously spent $800, all of his money, on quack treatment. During this period, he had of course wasted much of the company's time in self-treatment. The plant doctor took hold of the man and effected his cure at a cost of around $50.

Industrial surgeons of the large corporations are now trying to estimate the cost of the venereal diseases arising under the Workman's Compensation Law, from the fact that these diseases delay recovery from

minor accidents. Two instances as cited by a Pennsylvania concern will illustrate the many ramifications of these diseases.

A heavy-freight handler turned his ankle. The ordinary time for recovery is from four to six weeks. His compensation should have amounted to about $75. Latent syphilis delayed this man's recovery for seven months. Though not acquired in the course of employment, the disease cost this concern $386 in insurance.

Another workman, an Italian, fractured his thigh-bone. One year has elapsed and, because of a similar complication, he still is on crutches and receiving compensation. As compensation entitles an employe only to minimum pay, the workmen themselves also have been heavy losers.

These and countless other cases have made industrial physicians realize that the venereal-disease fight is their fight. But, it is too large and serious a problem to be left entirely to voluntary efforts. Affecting, as it does, the individual, it forms a problem for communities. The solution of this problem is found in organized opposition to the venereal diseases as a public health problem.

In many cities, venereal-disease clinics are open to the patient, at the present time, if he seeks treatment. Of the great need for such clinics, there can be no question and as to their value there can be little doubt. Just as individual concerns have found that the effort to control and prevent venereal diseases pays in increased efficiency, the state finds itself repaid through decreasing the number of state charges. Proper treatment preserves from public dependency many who would be lost if left untreated or at the mercy of the quacks.

Dr. Hugh Cabot, a world authority, has said, "Society must control syphilis or syphilis will control society." Indications, in the United States at least, are, that society will control syphilis if the present work is continued.

In fact, we may even look for the elimination of the evil. The medical profession has in its hands the power to blot out the venereal diseases. With this power available, we await only an organizing force that shall fully utilize it. Properly supported, an energetic campaign would subdue these wreckers of health and happiness in no more time than it took to eliminate yellow fever.

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[The present intensive mobilization of all available forces, in the campaign against venereal diseases, is a great step forward. Much can and will be accomplished during the next few years. Nevertheless, it would be futile to indulge in expectations like that suggested in the last sentence of this interesting article. The venereal-disease problem is very much more difficult than was that of yellow fever, and its solution will require far more effort and time. Despite this fact, however, the campaign must succeed if persisted in.—ED.]

"COMMERCIALIZED" THERAPY

An editorial in the last issue of *The National Eclectic Medical Association Quarterly* laments the fact that most medical men do not learn therapeutics until *after* engaging in active practice, and adds that a large amount of it is learned from the detail man. Indeed, the efforts of the clinical teacher in the medical college are so centered on the diagnosis, that therapeutic measures are hardly taught and, hence, the student's mind is hazy as regards therapeutics. "Therapeutics, as far as the dominant school is concerned, is absolutely in the hands of our large pharmaceutical houses. They make the investigations, experimentations, and market the product, detailing its uses, disadvantages, and so on.

No matter how much the "subservience" of the medical practitioner to the publication of pharmaceutical houses may be deplored in certain quarters, it is a fact that, as the editorial referred to declares, practicing physicians depend largely upon information brought to them by the representatives of manufacturing chemists. It is to the credit of American manufacturing chemists that the majority of them are exceedingly careful and conservative in their announcements and that they do not put out remedial agents without having investigated and tested them with great care, not only in the laboratory, but, also clinically with the assistance of friendly physicians on whose judgment they can rely.

One of the developments and a logical outcome of this condition is, the presentday house-organ, as it is published by many pharmaceutical chemists. We recall the

very useful and carefully prepared *working bulletins issued* by H. K. Mulford Company, to whom we are indebted, by the way, for a beautiful little booklet illustrating in word and picture the service of "Mulford on Land and Sea" under every Allied flag during the war.

Then, there is before us a copy of the *Metabolist* which is a record of progress in the study of internal secretions and metabolism. While published in the interest of the organotherapeutic products of the G. W. Carnrick Company, of New York, it contains carefully gathered information on the subject of endocrinous medication from the literature of the world. For instance, the second issue for 1919 contains one of the most instructive articles on thyroid therapy that we have read in a long time. It also has a splendid communication on the role of vitamines in nutrition, besides many other useful abstracts and articles.

The Therapeutic Digest, issued by The Therapeutic Digest Publishing Company, of Cincinnati, Ohio (which, incidentally, published Dr. Thomas S. Blair's splendid textbook on "Botanic Drugs, Their Materia Medica, Pharmacology and Therapeutics" that was reviewed in CLINICAL MEDICINE some time ago), also gleans, from the literature, abstracts of communications on the definite and deliberate treatment of disease by means of well prepared drugs and in accordance with existing indications. The fact that it is published in the interest of the Wm. S. Merrell Company, of Cincinnati, can not detract from the service that this little journal renders.

We venture to call attention to *Helpful Hints for the Busy Doctor* which, frankly a house-organ, published by The Abbott Laboratories, nevertheless contains, as its name implies, truly helpful hints that, we happen to know, many times have proved of great service to many physicians.

Another useful house organ is, *The Bacterial Therapist*, a journal of vaccine therapy, issued in the interest of G. H. Sherman, M. D., Detroit, Michigan, who specializes in bacterial vaccines and bacterins. This little journal contains copious extracts and abstracts from the related literature, while its editorial and original articles likewise are of decided service.

We can not refrain from acknowledging out indebtedness to much of benefit that we found in *Le Monde Médical*, an international review of medicine and therapeutics, published by the Pharmacie Astier of Paris, France. This little journal, in its well-known salmon-red cover, is an indefatigable messenger distributing the results of investigations made by French therapeutists.

There are many other house organs of merit that we might have mentioned. We did not attempt to enumerate all the good ones; as that would have required too much space.

In the selection of material, as well as in their preparation, these house organs give evidence of a great deal of careful painstaking research and study. Naturally, the topics are selected *"pro domo"*, and why should they not be? Medical supply houses have every right to advertise their wares and if, in doing so, they collect for the physician useful information, surely, there is no blame attaching to that. Fortunately, most houses issuing the kind of publication under discussion do so legitimately and honestly. Facts are not juggled or perverted but are stated fully and frankly. In the last instance, that is the primary condition on which business should be practiced.

WHAT OF RUSSIA?

This was the question propounded and it is surprising that, among the discerning, thoughtful people in this country, there are so few who give this subject any thought whatsoever. Of course, one reason for this apparent indifference is, the unrest and disturbance, in our country, that occupy the minds of all thinking people. We are confronted by a crisis, probably the greatest that ever faced us or any other nation in the world's history. Five million men are dictating terms to, and are undermining the prosperity and future of, a nation of more than one hundred millions. They have it in their power, not only to disturb but, to destroy that which it has taken generations to build. If this is true in our enlightened land, we may well appreciate how it was possible for a small minority of dreamers, idlers, anarchists and bandits to gain control of Russia, a land where 80 percent of the people are ignorant, undeveloped mentally. A nation of

giants in body, but, with the heads and hearts of children.

What of Russia? Indeed! One's heart aches in pity and one's brain refuses to contemplate what has transpired there during the past five years. There exists a condition of chaos, barbarism, savagery, rape, arson, destruction of all that was decent and good, such as the mind can not grasp nor the pen describe. It would require a Dante to depict the living inferno of the Russia of today. And, this is the Utopia to which our laborites, anarchists, I.W.W.'s and bolshevists are endeavoring to lead us. The symptoms of this disease have broken out in the United States, here and there, in the form of race riots and strikes. As yet, it is only a warning of what may be in store for us.

But, what of Russia? What concern is it of ours? Why should it occupy our minds? Why give it any thought? Are we our brother's keeper? Is Russia our neighbor? A land so little understood and with which we have so little in common? These are not questions of the thoughtless. There is an indifference towards Russia in the United States, as well as in other allied lands, that is astounding. Will we never realize that the nations of the world are interdependent, that we are all members of one body and that, when one member is attacked by disease, the entire body suffers? Is it necessary to point out that all the false doctrines now agitating our own land have been brought in from Russia, just as smallpox or yellow fever may be brought to our shores from the distant lands of China or India? Nothing spreads with more rapidity and menace than infectious disease, whether it attacks body or mind. In order effectively to stop the importation of yellow fever and to safeguard our own shores, it was necessary for us to send commissioners to Central America, under the guidance of General Gorgas, to attack the evil at its very source. So, we never shall exterminate the evils of bolshevism in this land until allied armies enter Russia, and, this for reasons of self-preservation.

But, there is another reason and that is, duty. The Allies have an obligation to fulfil which has been neglected. Paltry reasons are given for noninterference. The doctrine of "self-determination" has served as a "screen of smoke", preventing a clear vision of thinking people. Self-determination in chaotic Russia!!

There is no hope for Russia until the allied nations send an army of a million, composed of generals, engineers, commissaries, economists, master mechanics, and fully supplied with ammunition and food sufficient for an army of ten million men that can be recruited in Russia.

The Allies owe Russia more than they realize or care to confess. Russia stepped into the breach, ill-prepared, badly led and managed; but, it withstood the onslaught of the Hun for a long time and prevented the utter annihilation of Belgium and France and a final attack on, and conquest of, England. No intelligent student of current events, will deny that this was the inevitable prospect of the Entente. The Russian soldiers stemmed the onrush of the enemy with their bodies, they fought with clubs in their hands, for lack of ammunition, and without food or clothing. Russia not only sacrificed six million men in wounded and dead but, more than ten million men, women and children have died as a consequence of this war. They still are dying daily by the thousands, while the Allies wrap themselves in a mantle of high sounding phrases, and doctrinaires in all nations are making a virtue of their inactivity. Not until this nucleus of an army is sent, well provisioned, properly led, and the reins of government are taken over, will Russia be freed from the bandits who now hold her captive. Is there any hope for it and is there any guarantee against the conflagration now raging there from spreading into other lands including our own?

NATHANIEL NICOLAI.

New York City.

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[The author of this article is the New York manager of the firm of Hynson, Wescott & Dunning, of Baltimore, Md. We gather from Mr. Nicolai's name that he, himself, is a Russian by birth, and, for that reason, he has a peculiarly personal interest in the future and the destiny of Russia. Many of our readers will not concur in Mr. Nicolai's advocacy of intervention in Russia. The writer of this comment believes that such intervention would be extremely unwise. In the last analysis, Russia must work out her own problem. She never will be content with a government

forced upon her by outsiders, and an attempt on the part of the Allies to control her destinies would, in our opinion, only prolong the agony.

Whatever method of handling the Russian situation is adopted, eventually, order will come out of chaos; and, when it does come, Russia undoubtedly will go forward more rapidly than any other nation. Her physical resources are enormous and the capacity for development is almost incalculable. The Russian race is a strong one, and Russian men and women need only education and opportunity to develop a new world which may yet be a revelation to European civilization.—ED.]

AVOID GENERALIZATION IN TREATMENT

From the degree of knowledge required through more than one quarter of a century's close work, experience has clearly proven to me that but few of our remedies, appliances, or operations can be successfully commercialized. The business of the real doctor is confined almost exclusively to an individual basis. It may be that the present-day tendency is too much toward generalization of all the principles involved in the practice of medicine. It seems so to me. That may have come from the exigencies of military medical and surgical practice, where there is an absolute necessity of more or less generalization, because of the relatively small number of medical men in the service. This is true particularly in the event of epidemics, such as measles, influenza and so forth, during which the doctors are overrun, overtaxed in every way. Hence, they are forced away from the true principles of individualization into generalization; and, this is closely akin to empiricism.

It must be admitted that some few (but, they are extremely few) therapeutic measures may be universally beneficial, but, the number is so small as to render the whole tendency toward generalization objectionable. In the course of time, the pendulum will be forced to swing back and we shall then see a transposition of words and of the systems which they define; instead of "generalization" as applied to therapeutics, there will be "individualization"—happily so, for the patients.

LEWIS W. SPRADLING.

Athens, Tenn.

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[It is our constant endeavor to insist upon the necessity of individualization in the treatment of the ill. Not the disease, but, the patient is to be treated in accordance with the deviations from health existing in his particular case. In this, it should be kept in mind that, often, a restoration to physiological health, to normal, may not be possible in a given case; but, only a restoration to that state of relative health that is the best that can be attained in that person. Strictly speaking, an absolutely "normal" condition of health hardly ever is observed in civilized persons, almost everybody showing some deviations—normal to themselves. Since these differ in individuals, the necessity of individualizing at once is apparent.

However, there are, nevertheless, certain principles that permit of generalization within limits. Among these are, for instance, measures taken for the prevention of communicable diseases, those for the treatment of some phases of intestinal disfunction leading to autointoxication, again (within limits) the general principles governing the treatment of diabetes mellitus, of cancer, also that of many "surgical affections". In the end, however, it is well to remember always that the patient rather than the disease requires treatment.—ED.]

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

The Actual and the Ideal

[*Continued from January issue, page* 66]

And what does such a young and eager soldier in the battle of life find in the very first week of his enlistment in the ranks of his noble army? He finds this, that, so far from being able to put his lofty principles into practice for the benefit of the world, so far from being able to reform anything or to make the ways of the poor and downtrodden any pleasanter to travel, he can not even earn his own living. The path to each and every modest employment is littered and bestrewn, from end to end, with abuses that he would no more endure than he would lie down in a pig-pen for the night. He had been taught, and he had innocently believed, that the better, the nobler, the more just and merciful and loving he should be, the quicker he must surely make his way to a great place in the land. But, now, he finds, or is persuaded that he finds, that the nobler he is, the less he is wanted anywhere, except as a speaker to children at school exercises. In the hustling world about him, he can move neither hand nor foot. The better he is, the less is he fit to mingle and work with the successful ones, whose methods he set out so stoutheartedly and naively to purify and elevate. In order even to get a mere living by the work of his hands or his brains, he must sacrifice every dream of his youth and bend and adulate and run and smirk, until his very stomach rises in revolt and he is sick with fear and disgust and impotence and disillusion.

Never in his wildest dreams had he seen visions of the vileness of the acts that men would perform for the sake of that material gain which he had been taught to regard as the shadow, of which rectitude and love and generosity were the solid realities. Then what happens? Usually, he either retires from the conflict and, with the honest conviction that the world is too low and mean for the habitation of a decent man, degenerates into a misanthrope who is even meaner than the world he execrates; or, spurred by necessity, by a gnawing in the stomach, a belligerent landlady or by the blue toes sticking through his shoes, he throws his scruples to the winds and plunges into the strife, resolved to meet the enemy upon his own grounds and to rise to power over his remains. He reasons that he did not create these conditions, that he can not alter them, that they are too big, too wide, too universal to be overthrown by one man or any number of men. He will accept them as they are and make the most of them. And lo! by and by there arises from the ashes of this high nobility the captain of industry who, without qualms, indeed, with a brand of delight—the delight that can be felt in its depth and height only by the successful man of business—charges you thirty cents a pound for the paper wrapper on his thirty-cent product, as that is "the custom of the trade"! His youthful ideals are all gone now, the astounding, innocent, incompetent that he was ever to hold them.

Nevertheless, we find, if we know this man well, that he has not, in reality, lost his ideals, but, that he has merely changed the directions in which to express them. He is, perhaps, the best of fathers, the best of husbands, the best of neighbors and friends. He gives largely to charity, though he has learned not to do so openly, since that attracts all the material seekers in his world to the feast. He will not see too many of the righteous suffer, if he can prevent it, though he refrains from too much generosity, for the reason that he knows he can not help all the needy, that, to part with a small portion of his substance to all that are suffering from want, would be, to bankrupt himself at once. He gives, loftily, what he thinks is right, what he thinks is his share, and closes his eyes to all the rest. In his youth, he would have

scorned to retain anything for himself as long as another suffered. Now, he retains a competence, at least, and considers himself a higher order of clay than his beneficiaries, for the very reason that he has the wherewithal to give, the wherewithal that he has gained by practices which, at first, had shocked and nauseated him as he saw them carried out by others. But, now he has his excuses, his reasons, his justification for those practices. In the first place, he believes that he could get a living in no other way than by following the example of all the successful ones he sees around him, that it is necessary, is the world-order, and that to feel any qualms is, to be prudish, behind the times, hairsplitting, impotent. And, secondly, feeling this, he soon searches out his justification, which is, that the whole matter is a joke, that "gayly to pilfer", like Hermes, is a natural phenomenon. Was not Hermes, the god and patron of thieves, as highly regarded as any god of Olympus? Was not his function as necessary as that pertaining to any of the others? He did not steal with gravity, but, with laughter, ridiculing goodnaturedly the despoiled. And why? Philosophy gives the answer. It is because mighty Jove will not allow any persons to be stolen from except for their own good, is, because this loss is a necessity of growth, is a lesson by aid of which the bereaved one may, by many repetitions in this and other ways, become the learned, whole, perfect man that he is intended to be.

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If, then, a man can be stolen from, he ought to be stolen from. The thing is a joke, and a joke for his own good, however cruelly the loss may appear to affect him at the time. And it will be found that all rich men who have increased their store by aid of the usual methods regard life somewhat from this standpoint, either wittingly or unwittingly. They still have their ideals, but, they are not for business, they are out of place there. They are for the home, for social use, and here they may be indulged with the uttermost latitude. No man of the world can fail to have observed this truth; and, not to have observed it, is, to have observed scarcely anything else.

We have all around us at the present time certain proof of this levity with which dishonest business methods are received by the people at large. See the popularity of the "Get-Rich-Quick-Wallingford" plays on the stage, and of the stories in the magazines. All the middle-class reading (I can not call it literature) is crammed with glory for the thief and criminal. One play causes a father, who is a Wall Street broker, to advise his daughter how to invest ten thousand dollars, and when it develops that she, knowing him as she does, invests the other way, so that she has cheated and won from him what he had expected through his advice to cheat and win from her, the audience goes into convulsions of laughter, as though this picture of a thieving father and thieving daughter, each of whom was attempting to steal from the other, were a huge joke, to be admired and applauded! But, I do not think it would be found so in the average family life. It has been tried, often tried, but, I think there will never a case of it be found in actual experience that is not productive of wretchedness and tears rather than animalistic unthinking laughter.

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But, this is the vice of mankind, that it can not, and never has been able to, see through the surface to the reality and to judge the abstract by the fact. It can not realize the analogies that bind so closely together the ideal with the actual. If a man sees through the act or the thing to the meaning of it, as with a microscope, we discover the beauties of the gnarled bark of the tree, he will find that in the one case it is as in the other; that the truth very often is the opposite of the seeming, and that the act which, on the one side, appears to call for laughter means, at bottom, calamity and disgrace; while the act that appears as an overwhelming evil may mean the very height of truth and wisdom when seen in its essence.

The path from the ideal to the actual is not straight, it is vortical. If you raise your left arm and look into the mirror, it seems to be not the left one, but, the right arm that is uplifted. Nature, the appearance of things, is the mirror of the soul. In it, we see the reflection of what we are; but, eyes are required, intellect is required to make the proper allowances for the distortion that inevitably exists in that appearance; in that mirror, so that the record may read true and not falsely.

If it seems ominous to some of us that the exploitation of thievery and graft on

the stage and in the books of the times is received with such amusement and applause by people who are suffering from the practice of that very thievery against them in their private lives, ignorantly countenancing that which openly or covertly defrauds them of much of their hardly earned substance, it is because we do not see the meaning that lies behind the appearance. We all of us have our lessons to learn, and we learn them through tears as well as through laughter, and the vital defect in the understanding of some of us is that we ignorantly believe that one man can harm another, that we do not see that each man must learn his lesson in his own way, the way made imperative by his character and circumstances, and that some must learn by loss as others must by gain, while, at bottom, neither one is suffering more than the other.

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There is, however, a third kind of youth that goes out to seek his place in the turgid world. He also, like the two classes already named, has his ideals, and, like the others, he finds to his sorrow and humiliation that the actual is so different from his ideal that he can not even get a living as long as he holds to that ideal. But, he is wiser than the others. He sees that it is, indeed, true that, not only the ways of business, but, the ways of the professions, the arts, the trades, and even agriculture, are full of abuses, that the trail of the serpent is over them all, that each has its own tricks whereby il'egitimate gains are realized; but, after he has recovered from the first shock of his disillusionment, he does not crawl away into a hole in the ground and become a man-hater, neither does he drop to the sordid level of the life around him; for, he knows that what others are need make no more impression on him than the south zephyrs make upon the stout oak tree, providing only that he have the character to withstand the attack.

It is not for me to say how many of these youths there are in relation to the population, but, that there are some, and many more than most of us will believe, I am sure. This class of mind knows as well as anybody else that the world is packed to the brim with trickery of one kind and another, he knows that the general idea is that, to refuse to stoop to trickery, also is, to fail, is, to be trodden under foot, to be annihilated as a worker among men.

He differs from others in the fact that he doesn't believe it. In all these strugglers after the outer order, he recognizes merely a crowd of seekers after truth, who do not know truth when they see it, who are under a misapprehension as to what possessions are valuable and, misled by their ignorance, mistake glitter for gold, utterly unaware of the fact that he who has the medal has the reverse side as well as the obverse. He knows that every possible addition to any man's material possessions must be accompanied by a loss, to make good the immutable law of compensation, which, in worldly affairs, is as prevalent and as immutable as the law of gravitation is in the cosmos. He is content to take his stand on character and there to remain despite fate and a garret.

In his garret, bearing up under the burden of dry bread, out-at-the-side shoes, faded coat, and even, perhaps, ridicule and contempt, he certainly is sure that he is suffering no more than the successful are suffering, and that neither they nor he can suffer more than enough to "hold their noses to the grindstone" of learning while their education grows in their minds and hearts.

He is not here for things, he is here, like Solomon, and Chrishna, and Buddha, and Socrates, and Plato, and Emerson, and Spinoza, and the rest, for wisdom, for ideas, for the ideal as distinguished from the actual, from the appearance. To him, thievery is not an evil, it is a means by which the ignorant learn honesty. The chicanery of others affects him only as an opportunity, if they will give it to him, of showing them a better, an easier, a more delightful way.

The very idea of dropping to the low level of these poor ignoramuses would seem the height of absurdity to him. Think of Emerson trading off as sound a horse with a spavin and the springhalt! Think of it! You can not think of it. It would be an impossibility of nature. That is why he lived so delightful a life and had everything he wanted brought to him by the gods themselves. It is why he was able to speak with such unearthly wisdom that every man of brains and culture is filled with a rapture over his works that transcends the emotion-bred rapture of music or other sen-

sual delight, as the blue heavens outspan the brown earth.

It is experience with our deepest thoughts, the carrying them into expression in our lives, that confers the benefit of wisdom. To practice a thought, to work over with our hands the abstract idea that occupies the intellect, is, to become familiar with it, is, to find wherein it needs altering, is, to make it so much our own that we are enabled to use it as a basis upon which to erect a still more advanced thought. And so our wisdom will grow. Not to practice it, is, to lose it, and, if so many men see that we must have tragedy, that the world is filled with unavoidable suffering from which there is no relief this side of the grave, it is merely because they refuse to practice the modicum of wisdom they possess, substituting for it those methods that seem calculated quickest to bring in some material return which the employment of their highest thought on the matter would push away.

These men are not to be blamed, but, to be helped, if they will receive help: if they refuse help, as most of them will, we may at least love them and understand them well enough to let them alone, to permit them to learn their lessons in their own way, while we go our way in peace and content. They are in better hands than ours. If they were wise, there would be no need of the tragedy they endure; but, as they are not wise, they must have the tragedy, for, through it, and in this way alone, will they become wise.

[*To be continued*]

The ideal is the only absolute real; and it must become the real in the individual life as well, however impossible they may count it who never tried it.—George Macdonald.

Among the Books

SELLARDS: "PRINCIPLES OF ACIDOSIS"

The Principles of Acidosis and Clinical Methods for Its Study. By Andrew Watson Sellards. Cambridge: Harvard University Press. 1919. Price $1.25.

Of late years, the subject of acidosis has received considerable attention. The subject is imperfectly understood, for the reason that physiological chemistry is abstruse and difficult. When we start to theorize about what happens inside the body, we readily become involved in uncertainties.

This monograph is a clear and readable treatise on the principles of acidosis and contains an appendix which treats of the technic and methods of ascertaining the grade of acidosis.

We give the author's definition of acidosis: "Acidosis is fundamentally a diminution in the supply of fixed basis in the blood and tissues of the entire body, and the term should not be limited to the carbonates, nor to changes in the blood alone."

In the causation of acidosis, two factors are prominent, namely: defective oxidation of organic acids, and defective elimination of the mineral acids. In health, the acid is removed by oxidation and eliminated as carbon dioxide by the lungs. The normal kidney possesses the function of excreting acids in the urine. When the kidney is diseased, this function suffers, with the result that acid radicles, which are ordinarily eliminated in the urine, would now neutralize fixed bases of the blood, before elimination occurs.

In acidosis, the body protects itself, not by the development of new methods, but by an increased activity of its normal processes, chiefly through increased neutralization by ammonia and fixed bases. This protective mechanism is extremely efficient, maintaining a delicate adjustment of the equilibrium between acids and bases. In the presence of many factors which tend to disturb this equilibrium, and even with the extensive formation of acid radicles in the body, the reaction of the blood is maintained with remarkable constancy.

The immediate cause of death in acidosis is, perhaps, not the extremely slight change in reaction *per se*, but, rather, the lack of normal carbonate for carrying on the function of internal respiration. With the depletion of the carbonates, the oxygen is still carried by the arterial blood, but the resulting carbon dioxide accumulates in the tissues, since there is not an adequate supply of bases for transporting it to the lungs. With this accumulation of carbon dioxide, the tissues are no longer able to utilize the oxygen brought to them, the individual becomes dyspneic, and suffers from subjective symptoms of suffocation just as though he were deprived of air. This exhaustion of carbonates leads, first, to the development of air hunger and, eventually, to death if the exhaustion is sufficiently extreme. The cardinal feature of acidosis is that there is neither an increased production nor an accumulation of acid in the body, but the reserve supply of alkali-yielding substances is depleted in the prevention of acid in the blood.

HIRST: "MANUAL OF OBSTETRICS"

A Manual of Obstetrics. By John Cooke Hirst, M. D. With 216 Illustrations. Philadelphia and London: W. B. Saunders Company. 1919. Price $3.00.

This is a companion volume to the author's manual of gynecology, reviewed in a former number of CLINICAL MEDICINE. An effort has been made to present the subject of obstetrics as clearly and concisely as possible. The methods of treatment, and technic of operations, have been tested in practice, with satisfactory results.

Doctor Hirst has the happy faculty of making his ideas clear in few words, and yet not omitting the least important detail. The ability to get down to ground facts is the natural result of years of teaching and clear thinking. There are some men who naturally arrive at the kernel of any sub-

ject that comes to their attention. This faculty and an excellent style of writing make this manual invaluable to the general practitioner.

The best portions of the book are the chapters on normal labor, and the mechanism of labor. The latter is very hard to make plain to the average student, but it is the most important part of the subject of obstetrics. Without an intimate knowledge of this mechanical part of labor, he can not hope to be an expert obstetrician.

The chapter on normal labor in Doctor Hirst's larger book is a classic in obstetric literature. In the condensation of this chapter, something was lost. It is often of advantage to read a subject in some detail.

This volume should have a cordial reception. It is well written and admirably suited to the busy doctor.

LEVINSON: "CEREBROSPINAL FLUID"

Cerebrospinal Fluid in Health and Disease. By Abraham Levinson, B. S., M. D. With 56 Illustrations, including five color Plates. St. Louis: C. V. Mosby Company. 1919. Price $3.00.

In this volume, the author has given to the profession the benefit of his wide experience in the examination of the cerebrospinal fluid in relation to disease. It is an exhaustive treatise. Methods of examination for diagnosis are given and also the changes in the cerebrospinal fluid in various disease.

The chapter on intraspinal treatment is most important from a practical standpoint. The results in a few conditions are tabulated.

The reports of Flexner and his associates have established the fact that the best and most successful way of treating meningococcus meningitis is by means of antimeningococcus serum. The mortality of cases of meningitis that received serum has been reduced to one-half, in some epidemics to one-third of the mortality of cases that received no serum. It should be given in large doses.

The reports of Rosenow and Nuzum speak very optimistically of the serum treatment of epidemic poliomyelitis. They prepared a serum that they claim to be a specific against the organism found by them in the cerebrospinal fluid in anterior poliomyelitis. The entire question of the serum treatment of poliomyelitis is in a state of controversy.

When tetanus is fully developed, intraspinal injection is indicated. When tetanus antitoxin is injected directly into the cerebrospinal fluid by the intraspinous method, the serum comes directly in contact with the tetanus toxin and has a preventative if not a curative effect on the tetanus. It must be employed in large doses.

Anyone who wishes to inform himself in the latest advances in serum therapy as applied to the cerebrospinal fluid, will find a perusal of Doctor Levinson's book helpful. Serum therapy is only in its infancy. Medicine would be the gainer if more men like the author of this book could be found whose only object and sole wish is to add their quota to science.

STURMDORF: "GYNOPLASTIC TECHNOLOGY"

Gynoplastic Technology. By Arnold Sturmdorf, M. D. Illustrated with 152 Engravings, some in colors, and 23 full-page Plates with 35 Figures all in colors. Philadelphia: F. A. Davis Company. 1919. Price $5.00.

This volume contains a scholarly exposition of the author's views on gynoplastic technology. It is an elaborated compilation of the author's previous publications. Each topic is presented in monographic form.

The writer is a specialist in gynecological surgery, and looks at his subject from that angle. The illustrations are very fine, especially the colored plates of the different varieties of chronic endocervicitis.

The chapter on chronic endocervicitis is deserving of mention. The cervical mucosa is composed of deeply penetrating racemose glands which secrete mucus. It does not share in the cyclic changes of the corporeal endometrium. A more important fact is the marked susceptibility to infection of the cervical mucosa, while the corporeal endometrium is practically immune. This is in sharp contrast to the common view. The cervical mucosa is aptly termed by the author, "the tonsil of the uterus." If Doctor Sturmdorf is right, we shall have to reverse some of the usual gynecological procedures.

Another matter that can not be passed by is the connection between endocervicitis

and sterility. An inflamed cervix uteri will destroy any spermatozoa desiring to gain entrance. The pus alone would destroy them. Endocervicitis is then a very frequent cause of sterility and very emphatically it should be added; the most frequent cause of endocervicitis is gonorrhea. Which just goes to show that gonorrhea is not a trifling disease and emphasizes the importance of the education of the laity along that line.

Doctor Sturmdorf is to be commended for the scholarly way in which he has presented his subject and the evident care which he has given to the compilation of his material.

"FRAMINGHAM MONOGRAPH NO. 6"

Framingham Monograph No. 6, Sanitary Series II. Schools and Factories. Community Health and Tuberculosis Demonstration of the National Association for the Study and Prevention of Tuberculosis. Donald B. Armstrong, M. D., Executive Officer, Community Health Station, Framingham, Massachusetts. September, 1919.

The Framingham Monograph No. 6 deals with the general sanitary and hygienic conditions in the schools and factories of Framingham, Mass. The survey of these conditions was made two years ago. Consequently, many conditions reported upon in this survey have been eliminated or corrected.

In 1917, at the beginning of the Health and Tuberculosis Demonstration, the public schools of Framingham numbered sixteen, including three one-room portable schools and a one-room rural school. This equipment, including sixty-eight rooms, was available for a school population of three thousand children.

The points investigated in the schools were, heating and ventilation; illumination of school rooms; seating capacity; washing facilities; drinking facilities; janitor service, and general matters.

Framingham is a typical American industrial community with approximately thirty-seven industrial establishments, twenty-nine of which were covered in this study. There are about five thousand industrial workers in the town.

A special study was made of the ventilation in certain typical plants, where the questions of dust fumes, chemical and general ventilation were touched upon. This was carried out through the cooperation of the New York State Commission on Ventilation.

A special study of safety devices in a number of Framingham plants was conducted by the New York Museum of Safety.

Finally, a general sanitary study of the Framingham industries was undertaken, overlapping, in a general way, the particular interests touched upon more intimately by the special ventilation and safety studies carried out through the cooperation of the Massachusetts State Board of Labor and Industry.

HURRY: "VICIOUS CIRCLES IN DISEASE"

Vicious Circles in Disease. By Jamieson B. Hurry, M. A., M. D. (Cantab.). With illustrations. Third and enlarged edition. Philadelphia: P. Blakiston's Son and Company. 1919. Price $4.00.

It is, unfortunately, impossible for the physician to read even a tithe of the really worth-while books which come unceasingly from the publishers' presses but, now and again, a volume appears which no man intelligently engaged in the practice of medicine can afford not to buy and study carefully. Such a book is Hurry's "Vicious Circles", and, after a single perusal, the Reviewer feels that he has acquired a fund of practical knowledge which must enable him to obtain therapeutic results where heretofore his efforts too often have proven ineffective.

We are all intentionally or unwittingly engaged in breaking "vicious circles" but we do not always recognize their existence or realize, even though we dimly sense the circle, that an attack at the *locus minoris resistentiae* may easily result in a break and such a break be followed by the patient's recovery. As Hurry puts it, "when the gyration has been stopped, the whirling currents will be restored to their normal direction. The hound which had turned to hunt its own tail will once again be headed upon the proper track." He acknowledges that to deal satisfactorily with the subject of *breaking* vicious circles would require a special—and lengthy—treatise, but he does, in an acceptable manner, focus attention on therapeutics as viewed from this particular standpoint. However, as each

physician will probably elect to choose his own method of breaching the circle he has discovered, the main value of Hurry's monograph lies in the thoroughness with which the great number of vicious circles are described and classified. Numerous diagrams are presented and even the hurried—or careless—reader will find himself absorbing information heretofore obtainable only after prolonged research.

BULKLEY: "MEDICAL TREATMENT OF CANCER"

The Medical Treatment of Cancer. By L. Duncan Bulkley, A. M., M. D. Senior Physician to the New York Skin and Cancer Hospital, etc. Philadelphia: F. A. Davis Company. 1919. Price, $2.75.

Anything that sheds light upon the pressing problem of cancer is of interest to every man practicing medicine, and anything emanating from Bulkley, dealing, as it always does, with the medical aspects of the disease, merits particular attention. As a matter of fact, we are today little better equipped to fight cancer than we were a quarter or even half a century ago, and, despite the most assiduous work in the laboratories, have gained very little knowledge regarding the real nature and cause of the disease. It does, indeed, seem to be proven that cancer is *not* due to a parasite and most observers regard it as noncontagious and *not* due entirely to local irritation or trauma, but the research men have failed to discover why one's normal cells should suddenly take on a morbid action with a steady tendency to malignancy. Bulkley considers that cancer is due to a disordered metabolism and believes that early and intelligent medical and dietetic treatment will prove more effective than surgical procedure, however radical. His arguments are well and interestingly presented, and the practitioner unfamiliar therewith can not consider himself as perfectly qualified to take charge of cancer cases. The chapters on precancerous conditions, and cancer in general practice, will prove of particular value to the man in the field who has to meet conditions as they present.

WALLGREN: "BACTERIOLOGY"

Bacteriology in Abstract. By A. B. Wallgren, B. S., M. D. Pittsburgh: Medical Abstract Publishing Company. 1919. Price $1.25.

The smaller manuals and compends of the different branches of medical science have become very popular with a large number of medical men. The reason is not far to seek. The best the average doctor can hope to do is to know a little of everything. The compend contains much in little.

This compend of bacteriology is complete and authoritative, It is intended to be carried in the pocket for constant reference and is particularly useful to medical, dental and pharmacy students, physicians and nurses, and teachers in general.

This abstract deserves special mention. It is well worth reading and digesting. A busy doctor ought to receive more benefit from a perusal of this little book than from some of the larger textbooks in bacteriology.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Queries

QUERY 6471.—"Treatment in Uncinariasis." R. H. E., West Virginia, writes: "Please outline the treatment of hookworm disease."

As you doutbless are aware, oil of chenopodium is now being used extensively and has, to a great extent, replaced thymol, heretofore regarded as a specific.

According to recently published reports, oil of chenopodium, with or without purgation by means of magnesium sulphate, has been given in doses of 3 to 10 drops, 15 drops, 16 drops, or, 10 minims, 15 minims, 16 minims, 17 minims, 21 minims and 30 minims, for adults, the dose being given once or repeated for a total of two to three doses. The interval between doses, as stated, is one-half hour, one hour, two hours, four to five hours, and twenty-four hours. The oil may be given in sugar, molasses, honey, milk, emulsion, capsules or globules, and is followed by magnesium sulphate, Glauber's salts, castor oil, castor oil and chloroform, unspecified cathartics, or by no purgation whatever. The interval between the last dose of oil and the dose of purgative is, usually, two hours; sometimes, four hours. Occasionally, the oil of chenopodium is combined with castor oil, chloroform, and oil of eucalyptus.

The use of three doses, with a one- or two-hour interval, is advocated usually and this writer, from a rather extensive personal experience, would recommend that the 10-minim dose be not exceeded, and that great care be taken in giving oil of chenopodium is combined with castor oil, chloroadministration of castor oil.

It should be remembered that 1 minim and 1 drop of chenopodium are not the same thing. A casual test shows over 2 drops to the minim, a given number of minims, therefore, constituting more than double the dose of the same number of drops.

Probably, the maximum dose (that given by Keith) is, three doses of .30 minims each at hourly intervals, and it should be remembered that severe poisoning has resulted from this dosage. As a matter of fact, more than one child has died after receiving ½ dram of oil of chenopodium.

Extensive experimental work on dogs indicates that the prompt administration of castor oil has a very distinct protective value against the irritant and toxic properties of oil of chenopodium.

In an interesting article (*Jour. Amer. Med. Assn.*, Dec. 15, 1917), Salant points out the importance of oil of chenopodium as shown by the fact that it has been employed in several million cases of hookworm disease in the last few years.

The average physician never must forget that oil of chenopodium is a strong local irritant causing severe inflammation of the mucous membrane. Of particular importance is, the observation made that a dose that is not effective, at first, may cause serious symptoms and death when repeated within one or several days; this sensitiveness to the oil of chenopodium persisting for from five to nine days. Fasting or poorly-nourished animals succumb to much smaller doses. The resistance was noticeably greater, on the other hand, in animals that had been receiving a rich carbohydrate diet for several days before the oil was given or when the administration of the oil of chenopodium was preceded by a sufficient quantity of fatty oil, such as, olive oil, cocoanut oil, or castor oil.

Disturbance of renal function may be caused as shown in experiments in which the permeability of the kidney was tested after the administration of oil of chenopo-

dium. Albumin and casts frequently were found when it was given to rabbits in an emulsion in acacia.

Its poisonous nature was shown also by the tendency to cause depression of the circulation and respiration as well as to lessen the intestinal movements. Uterine contraction may likewise be inhibited if the isolated organ is exposed to the oil.

The substance under consideration should, therefore, be handled with caution. In the presence of renal or cardiac disorders, oil of chenopodium should be given in small doses only; while, in advanced cases of chronic nephritis or heart disease, its use would seem to be altogether contraindicated. In hepatic and gastrointestinal diseases, it likewise may prove more toxic.

Treatment of poisoning: When large doses have been swallowed, lavage may be resorted to with beneficial results. The routine administration of large doses of castor oil, before and soon after oil of chenopodium, as recommended by Hall and Foster, should be given serious consideration, as it may prove to be of prophylactic value. No chemical antidote has yet been found. The treatment in cases of poisoning would, therefore, be symptomatic. Digitalis and epinephrin are excellent antagonists. Caffeine, on the contrary, aided the action of the oil of chenopodium.

In administering thymol, the following very simple procedure should be observed: Give the last meal at noon; on retiring, give a full dose of magnesium sulphate or a laxative saline; the next morning, the patient still fasting, 20 grains of thymol in an equal or larger quantity of sugar of milk is given, and one hour later a second such dose; two hours later (or earlier, if symptoms of thymol absorption are observed) magnesium sulphate is again ordered and pushed to effective purgation.

Oils of any kind are solvents of thymol and must not be given in combination with it; also, alcoholic beverages and fats should be abstained from for at least forty-eight hours after treatment.

Children under five, may receive 8 grains of thymol; from five to twelve years old, 15 grains; from twelve to fifteen years, 30 grains; patients of sixty years or over, not more than 40 grains.

The initial treatment should be repeated at intervals of two or three weeks, until the feces show freedom from parasites or ova. In the interval, the sulphocarbolates of calcium, sodium and zinc, with thymol, gr. ¼, may be administered with advantage.

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QUERY 6472.—"Impetigo Herpetifo rmis." W. H. B., Idaho, reports a case in which the clinical picture is that of impetigo herpetiformis, except that the lesions are over the spine of the scapula or a little higher. Ammoniated-mercury ointment seems to do it no good. He "would greatly appreciate any advice in regard to treatment and prognosis."

We regret that you did not give a much clearer idea of the conditions you have to contend with. You merely say "the clinical picture is that of impetigo herpetiformis, except that the lesion is over the spine of the scapula or a little higher."

As you undoubtedly are aware, impetigo herpetiformis is an extremely rare disease and occurs in women almost exclusively, in the majority of cases while in the puerperal state. The eruption is preceded and accompanied by grave systemic disturbance and, usually, the trouble ends fatally.

The lesions are situated chiefly upon the genitocrural region, the inner and flexor aspects of the thighs, and the anterior surfaces of the body, although other parts may share in the disease. It consists of minute pustules, usually grouped in circles, with a tendency to crowd together into patches. These crust over and new lesions and circular groups appear at the periphery. In such manner, large areas are involved. The crusts are of a yellowish, greenish, or brownish color, and the surface beneath them is red and moist, looking not unlike that of a weeping eczema. In some cases, almost the entire surface may become invaded, even the mucous membranes of the mouth, nose and throat.

As you do not state that your patient is a woman and the eruption seems to be limited to the region above the scapula, we are inclined to believe that you have to deal with a much less serious malady—either pemphigus or dermatitis herpetiformis.

Dermatitis herpetiformis also is a comparatively rare disease, and may present with slight systemic disturbance (occasionally, though, the latter is extremely grave), malaise, loss of appetite, constipation, chil-

liness, flushings, rise of temperature. These symptoms may precede the eruption, and continue during the first days of the cutaneous outbreak.

The eruption may be erythematous, papular, vesicular, bullous, pustular, or mixed; it never is ulcerative, but, the vesicular variety is the most common. The onset may be sudden or preceded, for several days, by some cutaneous irritation, usually itching. When fully developed, the eruption may cover a limited area or almost the entire body-surface. Itching usually is a constant and most troublesome feature; pigmentation sooner or later is noted in most cases. Bear in mind that, in this disorder, vesicles, pustules and blebs are somewhat peculiar in shape. Many of them are of a strikingly irregular outline, being oblong, stellate, quadrate, semilunar, or perhaps ring-shaped, and, when drying, are likely to have a puckered appearance. Occasionally, in the graver cases, the lesions contain a slight admixture of blood. They may disappear by absorption or, if ruptured, leave abrasions which secrete for a long time and dry up; or crusting may occur, the crusts falling off, leaving erythematous spots, which in time fade or leave slight pigmentation.

The etiology of dermatitis herpetiformis somewhat obscure; in most cases, it may be regarded as of a neurotic nature. The prognosis must be guarded. Relief may be promised, still, only the most cautious statements should be advanced.

Stelwagon points out that dermatitis herpetiformis is a persistent and chronic disease, capricious in its behavior and course, and rebellious to treatment. Permanent recovery is rather exceptional.

Externally, the use of lotions of an antipruritic character will give the most relief. Blebs, if present, should be opened and evacuated. Tar-and-sulphur ointment, ichthyol (in an aqueous solution, from 2 to 10 percent strength) and boric acid in saturated solution, are of value. We should be inclined to use zinc-oxide and creolin ointment (zinc oxide, 10%; creolin, 1.38%; ceresin, 10%; petrolatum, q. s. ad 100%).

Internal treatment must rest upon the recognition and correction of any factor detrimental or disturbing to the nervous equilibrium. Elimination, careful dieting and the administration of arsenic, iron and quinine, with or without the addition of brucine or strychnine, are essential. Alkalies and diuretics often are of value, and acetanilid favorably influences pruritus.

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QUERY 6473.—"Eggsactly!" G. D. K., Florida, writes: "DaCosta's Handbook of Medical Treatment" gives the food value of eggs as:

	Protein	Fat	Calories
Uncooked	14.8	10.5	153.7
Cooked (boiled)..	14.0	12.0	164.0

Why is there more fat and less protein in a boiled egg than in an unboiled one?

"Please name the poison, its action on system and how it acts, in spider bites. Have had some cases caused by the 'black widow' (lactrodectus mactans)."

These seemingly innocent questions have brought the writer more woe than you can imagine. Eggscuse us a moment while we weep!!

In the first place, we have for many years cherished the delusion that we knew all about eggs. We used to be so intimate with them that we incorporated two or three into our system every day. Of course, "since the eminently satisfactory termination of the late war," we have only been on bowing terms with the fruit of the hen, and the very few specimens we have come in personal contact with seem to contain more sulphureted hydrogen than proteins and fats.

However, immediately upon receipt of this letter, we went out and looked the six yearling pullets, resident in our hen house and sold to us as likely to become fecund early this fall, straight in the eye and humbly requested them to produce immediately two ordinary eggs, one of which we could analyze boiled and the other "as is"; but, up to the present moment, those six pullets maintain their virgin integrity and, while they eat constantly, they refuse to ovulate.

"Ain't Nature wonderful!" Failing "at the source", this writer started out to procure eggs regardless and made a requisition upon the treasurer of the institution for two perfect specimens. In reply, he received notification that, "owing to the industrial unrest and general tightness of call-money, it was deemed inadvisable by the Board of Directors to incur such an expense."

Turned down in this direction, he then started through the building, accosting his

associate editors, heads of the physiological department and experimental chemists, with the query: "Why is an egg?" As a result, everyone began to shun him and one of the assistants in the laboratory just shoved his head into the door and vulgarly remarked: "Why is a nut?" Even the hardened stenographer has been edging away and looking at him suspiciously for the last hour, and he is beginning seriously to believe that his sanity is in question.

Under the circumstances, speaking of "Nature being wonderful", we must admit that science is even more marvelous. In the first place, Doctor, it is obvious that the analyst who tackled the egg for DaCosta could not have utilized the same egg for his "as is" and "boiled" experiments.

The writer always has thought that eggs varied somewhat, not only in their weight and complexion but in their physical constituents. He is fortified in this opinion by the fact that all the analyses of eggs vary quite materially, and he notices with particular pain and dismay that eggs analyzed by obese German chemists "befoh de war" contained a great deal more fat than the DaCosta egg, whether in its pristine loveliness or hard boiled. And, just think of the price we are paying for these eggs with reduced fat! Again, what intrigues us particularly is: How can one convert proteins into fat by boiling? Our chemists simply smile in a superior manner when asked to explain and say: "It can't be did" and further remark that, if the original egg contains 10.5 of fats only, the same amount of boiled egg certainly will not contain any more. We could, of course, understand it if the fat content were *less* for, some of it might have "boiled out". Here, again, a vast field opens up to our view. What could prevent us, under such circumstances, from evaporating the water in which the eggs were boiled and selling the egg-fats we can skim therefrom? Is it not possible that the canners missed a great opportunity and that fats, even now, are held to a certain extent in the waters in which we did boil our eggs?

One's brain whirls on attempting to solve this vital problem and the writer has decided that, in order to save himself from going around like a jibbering idiot, accosting everybody with the query, "Why is an egg?" he will leave the question unsolved.

Your second question also serves to convince us of the fact that our education has been neglected and that, anyhow, we don't know half as much as we once thought we did. We know, of course, that there is such an insect as *lactrodectus mactans,* and, also, that several deaths are reported to have followed its bite, but, the exact composition of the venom of the spider is unknown to us, though we have always believed that it contained formic acid.

Such works of reference as are available treat the whole subject very briefly and we are therefore compelled to ask you to propound your question to the Surgeon-General's Department at Washington, D. C.

In passing, we might venture to state that we also have "had some cases" caused not only by black widows but by blond-haired and red-headed ones. Just what their action is on the system, we could explain, but, won't. From personal experience, we would, however, caution particularly against the red-headed variety. The black ones, to us, have been camparatively harmless for the simple reason, perhaps, that we never have desired to tease one of them to the biting stage. You see, we don't particularly like brunettes and, having read Dickens in our boyhood, we are shy of "widdies".

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Later: On further deep consideration of that DaCosta egg problem, we have come to the conclusion that the analysis is correct—not, that there is any real change in the fat content, but, in the proportions. For instance, in one hundred Grams of raw egg, we have a 14.8-percent-protein and a 10.5-percent-fat content; and, in the boiled egg, which has lost, by boiling, some water and suffered some protein destruction, a 12.0-percent-fat as against 14.0-percent-protein; that is to say, we have a concentrated substance to consider. That there has been an absolute increase in fats is, of course, impossible.

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QUERY 6474.—"Urethral and Vesical Irrigation." D. A., Oklahoma, writes: "It has been my misfortune to obtain only bad results from irrigation of the urethra and bladder. The patient always complains of

feeling worse thereafter. It may be due to my technic. I would like to have your advice as to the method you approve."

Irrigation of the urethra is a very simple matter and merely requires that the desired solution be allowed to run into the urethra and out again, either by means of hydrostatic pressure coming from a fountain syringe or gently injected by means of a large piston syringe. Sometimes, a small catheter or other hollow tube is used for anterior irrigation, in which case the instrument is passed down to the bulbus urethræ and the solution allowed to run through the instrument and escape by its side.

In case the bladder is to be irrigated by catheter, the instrument is passed into the organ and, the fluid injected. When the desired amount of solution has been thrown into the bladder, either the solution is allowed to escape through the instrument or this is withdrawn and the patient voids the fluid in the usual manner.

The Janet method of urethrovesical irrigation has attracted a great deal of attention of late years and is today quite commonly employed. As you may be aware, Janet recommended the use of permanganate-of-potash solution of certain strengths, as well as sufficient hydrostatic pressure by means of elevating the reservoir of a fountain syringe to have the fluid pass through both the anterior and posterior urethra, into the bladder, when such a procedure was indicated.

Irrigations, as recommended by Janet, should be given either for the purpose of aborting an acute urethritis at its beginning or else should be used conservatively after the fifth or sixth day, i. e., after the acute stage has terminated.

Weaker solutions of permanganate of potash, i. e., 1:4,000 or 1:5,000, have been found just as efficient and less apt to cause complications, as the 1:1,000 solution formerly recommended. Usually, 1:4,000 is used at the beginning and the strength may be gradually increased to 1:2,500 to 1:2,000. Very rarely indeed should any stronger solution than 1:1,000 be employed and that only in the anterior urethra.

For anterior irrigations, the bottom of the irrigating jar is from one to two feet above the pubes of the patient. The regulation of the amount of pressure employed in irrigating the anterior urethra can be correctly arrived at only by practice, and the beginner is apt to err in using too much pressure rather than too little. The temperature of the solution should be from 105 to 120 degrees F. The technic is simple, the patient sitting on a douche pan or else leaning back in a chair in such a way that he rests on the sacrum, in which case he has a piece of rubber sheeting over his lower extremities.

The physician stands or sits at the right side of the patient. Guiteras directs that he then holds the penis with the left hand, while with the right he regulates the cut-off valve of the irrigating apparatus. A small amount of fluid is then allowed to run out in order to remove any air bubbles or the remains of fluids from previous irrigations. The stream is next allowed to play upon the glans and the urethral orifice. The penis then is held with the left hand in such a manner that the tips of the fingers surround the wall of the anterior urethra, the index finger and thumb being immediately behind the corona of the glans, while the other fingers cover the canal down to the penoscrotal junction. The tip of the irrigating nozzle is next introduced into the meatus and the fingers are gradually relaxed, allowing the anterior urethra to be filled. The tip is now slightly withdrawn, without actually removing it from the meatus, and the stream of fluid escapes. This procedure is repeated several times. The nozzle is removed and the last three fingers of the right hand press from below upward upon the perineum so as to remove any fluid that may have collected in the bulb. The irrigation is continued in this way until the irrigator is emptied, a period of from five to ten minutes. It is essential to secure a sufficient amount of distention of the anterior urethra every time the fluid enters. The instant the maximum distention has been reached, the tip must be withdrawn or the grip on the organ relaxed; otherwise, the fluid may pass into the bladder. When it is considered necessary to irrigate the posterior urethra as well, the irrigator is raised four or five feet above the pubes in order to have the fluid overcome the compressor-urethræ muscle and enter the posterior urethra and bladder. The solution is not allowed to escape by the side of the nozzle, but, when the anterior urethra is full, the patient is told to breathe deeply and try to urinate. This

tends to relax the cut-off muscle and allow the fluid to enter the posterior urethra and the bladder. More solution then is allowed to flow into the uretha, and the sensation of filling and relaxing is experienced by the patient until the bladder is full.

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QUERY 6475.—"Mountain Sage (Artemisia Tridentata)." E. E. B., Washington, has been trying to procure a fluidextract of normal tincture of mountain sage but, so far, has been unable to do so. Sage grows in great quantities in his locality and he believes it to possess valuable therapeutic properties.

We are unable to obtain a "fluidextract or tincture of mountain sage" (artemisia tridentata). It is just possible, however, that you may be able to procure some preparation of this plant from Lloyd Brothers or Wm. S. Merrell, both located in Cincinnati.

Eclectic physicians in the west consider this drug as possessing emmenagog properties and it is in common use for putrid angina, arthritic rheumatism and diphtheria. The oil, mixed with olive oil, is, we understand, employed in erysipelas, contusions, sprains and swellings. It has also been employed internally in flatulent colic. The leaves are used as a fomentation for abscesses and are said to "promote the rapid formation of pus and impart such a healthy tone to the parts that the disease is quickly brought to a termination with the least possible destruction of tissue." The Indians employ an infusion for colds, headaches and to expel intestinal parasites.

It is unnecessary, of course, to call your attention to the fact that mountain sage (artemisia tridentata) is closely allied to artemisia absinthium (wormwood), which yields two azotized (nitrogenized) substances, one intensely bitter, the other insipid; a volatile oil, an intensely bitter resin, a green resin (probably chlorophyll), albumen, starch, potassium absinthate and nitrate, and absinthic acid—the latter probably identical with succinic acid; also containing acetic and malic acids. The color is due to the presence of a dark-green (sometimes yellowish or brownish) oil known in commerce as oleum absinthii, or oil of wormwood. This oil consists principally of absinthol, which yields cymene, water, and a resinous body when heated with chloride of zinc or phosphorus pentasulphide. A larger quantity of oil is obtained from the dried than from the green plant, the amount being also diminished by circumstances of growth, yielding a lesser quantity when the plant is cultivated or when grown in warm regions. The peculiar bitterness is due to absinthin.

It should be borne in mind that both, oil of wormwood and extract of absinthium act upon men as nerve depressants.

*Imparting knowledge, is only lighting other men's candles at our lamp, without depriving ourselves of any flame.—**Jane Porter.***